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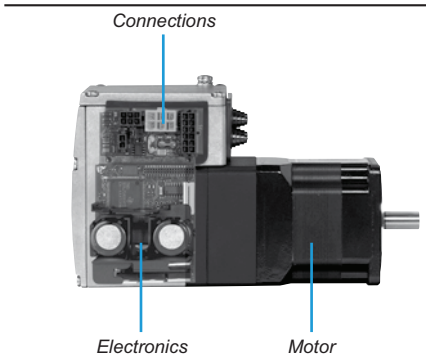
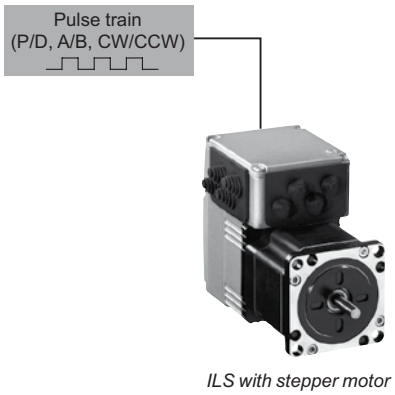
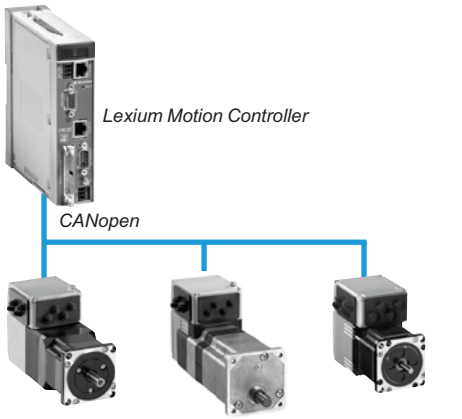
Lexium integrated drives
Presentation





ILS with stepper motor



ILA with servo motor

ILE with brushless DC motor

ILS with stepper motor

Product offer

Lexium Integrated Drives consist of a motor and control electronics. They are controlled via a fieldbus, pulse/direction or I/O interface (“motion sequence” operating mode). The Lexium Integrated Drives are used as decentralised drives in machine building and automation technology. Together with a motion controller such as Lexium Motion Controller or a PLC, the systems allow for simple and economic implementation of complex automation task. Ready-to-be-used function blocks facilitate motion programming with a Schneider Electric motion controller . The Lexium Integrated Drives from Schneider Electric excel with the following properties:

Compactness

Motor and electronics form a single, compact and small-footprint unit. No space at all is required for the control electronics in the control cabinet and only very little space in the machine.

Simplicity

Integration of motor and electronics reduces the installation costs and simplifies the EMC concept. The user-friendly PC commissioning software allows for rapid commissioning.

Openness

The Lexium Integrated Drives with fieldbus interface are available in two versions:
- for communication via CANopen, PROFIBUS DP, RS 485
- for communication via DeviceNet, EtherCAT, Ethernet Powerlink, Modbus TCP

Lexium Integrated Drives with stepper motors are available with a pulse/direction interface or an I/O interface for motion sequence.

This open communication concept allows for integration into existing system environments.

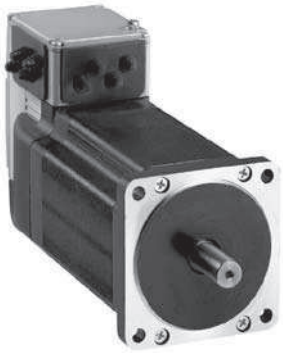
Flexibility

The Lexium Integrated Drives can be equipped with various motor types: AC synchronous servo motor, brushless DC motor or stepper motor. Each motor type offers specific advantages so that the Lexium Integrated Drives can be used in a large variety of different applications.

Safety

The integrated “Safe Torque Off” (“Power Removal”) safety function enables a stop of category 0 or 1 as per IEC/EN 60204-1 without external power contactors. This reduces the system costs and response times. The drive system fulfils the requirements of IEC 61508 SIL2 as well as of ISO 13849-1 perfomance level “d” (PL “d”) and IEC/EN 61800-5-2 (“STO”) .

Product offer

ILA●	ILE●	ILS●●57	ILS●●85
			

IL●1 with fieldbus interface for CANopen, PROFIBUS DP, RS 485		
ILA1 with AC synchronous servo motor	**ILA1●**	
Torque range	0.26 ... 0.45 Nm; peak torque: 0.4 ... 0.72 Nm (without gearing)	
Range of speed of rotation	Without gearing: up to 7500 rpm	
Positioning resolution	0.02° (singleturn encoder, optional: multiturn encoder with positioning range of 4096 revolutions)	
Interfaces	Fieldbus interface: CANopen, PROFIBUS DP, RS 485 24 V signal interface with 4 freely programmable I/O signals; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Homing, jog, profile position, profile velocity, electronic gear *(1)*	
Configuration	Via “Lexium CT” commissioning software or fieldbus	
ILE1 with brushless DC motor	**ILE1●**	
Torque range	Without gearing: 0.17 Nm; with spur wheel gear: 3.1 ... 11 Nm	
Range of speed of rotation	Without gearing: up to 4800 rpm	
Detent torque	0.08 Nm (without gearing); 1 ... 8 Nm (with spur wheel gear)	
Positioning resolution	0.26° ... 1.67° (with spur wheel gear)	
Interfaces	Fieldbus interface: CANopen, PROFIBUS DP, RS 485 24 V signal interface with 4 freely programmable I/O signals; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Homing, jog, profile position, profile velocity	
Configuration	Via “Lexium CT” commissioning software or fieldbus	
ILS1 with 3-phase stepper motor	**ILS1●57**	**ILS1●85**
Torque range	Without gearing: 0.45 ... 1.5 Nm	Without gearing: 2 ... 6 Nm
Range of speed of rotation	Without gearing: up to 2000 rpm	Without gearing: up to 1000 rpm
Positioning resolution	0.018°	
Interfaces	Fieldbus interface: CANopen, PROFIBUS DP, RS 485 24 V signal interface with 4 freely programmable I/O signals; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Homing, jog, profile position, profile velocity	
Configuration	Via “Lexium CT” commissioning software or fieldbus	

(1) “Electronic gear” operating mode not with ILA1 with multiturn encoder

Supply voltage
Lexium Integrated Drives IL●1 can be operated with a supply voltage of 24 V⎓ or 36 V⎓.

IL●2 with fieldbus interface for DeviceNet, EtherCAT, Modbus TCP, Ethernet Powerlink *(1)*		
ILA2 with AC synchronous servo motor	**ILA2●**	
Torque range	0.31 ... 0.78 Nm; peak torque 0.45 ... 1.62 Nm	
Range of speed of rotation	Without gearing: up to 7000 rpm	
Positioning resolution	0.02° (singleturn encoder, optional: multiturn encoder with positioning range of 4096 revolutions)	
Interfaces	Fieldbus interface: DeviceNet, EtherCAT, Modbus TCP/IP, Ethernet Powerlink 24 V signal interface with 4 freely programmable I/O signals; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Profile velocity, jog, profile position, homing, electronic gear *(1)*	
Configuration	Via “Lexium CT” commissioning software or fieldbus	
ILE2 with brushless DC motor	**ILE2●**	
Torque range	Without gearing: 0.26 ... 0.5 Nm; with spur wheel gear: 3.1 ... 11 Nm; with worm gear: 2.5 ... 10.6 Nm	
Range of speed of rotation	Without gearing: up to 6000 rpm; with spur wheel gear: up to 4800 rpm; with worm gear: up to 4000 rpm	
Detent torque	Without gearing: 0.08 ... 0.106 Nm; with spur wheel gear: 1.1 ... 8 Nm; with worm gear: 2.9 ... 16.7 Nm	
Positioning resolution	Without gearing: 30°; with spur wheel gear: 0.26° ... 1.67°; with worm gear: 0.26° ... 1.26°	
Interfaces	Fieldbus interface: DeviceNet, EtherCAT, Modbus TCP/IP, Ethernet Powerlink 24 V signal interface with 4 freely programmable I/O signals; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Profile velocity, jog, profile position, homing	
Configuration	Via “Lexium CT” commissioning software or fieldbus	
ILS2 with 3-phase stepper motor	**ILS2●57**	**ILS2●85**
Torque range	Without gearing: 0.45 ... 1.5 Nm	Without gearing: 2 ... 6 Nm
Range of speed of rotation	Without gearing: up to 2000 rpm	Without gearing: up to 1000 rpm
Positioning resolution	0.018°	
Interfaces	Fieldbus interface: DeviceNet, EtherCAT, Modbus TCP/IP, Ethernet Powerlink 24 V signal interface with 4 freely programmable I/O signals; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Profile velocity, jog, profile position, homing	
Configuration	Via “Lexium CT” commissioning software or fieldbus	

(1) “Electronic Gear” operating mode not with ILA2 with multiturn encoder

Supply voltage
Lexium Integrated Drives IL●2 can be operated with a supply voltage of 24 V⎓ or 48 V⎓.

IL●1 with I/O interface for motion sequence		
ILS1 with 3-phase stepper motor	**ILS1M57**	**ILS1M85**
Torque range	Without gearing: 0.45 ... 1.5 Nm	Without gearing: 2 ... 6 Nm
Range of speed of rotation	Without gearing: up to 2000 rpm	Without gearing: up to 1000 rpm
Positioning resolution	0.036°	
Interfaces	Multifunction interface for motion sequence; RS 485 commissioning interface; 24 V signal interface; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Motion sequence; jog, profile position, homing	
Configuration	With “Lexium CT” commissioning software	

IL●1 with pulse/direction interface		
ILS1 with 3-phase stepper motor	**ILS1●57**	**ILS1●85**
Torque range	Without gearing: 0.45 ... 1.5 Nm	Without gearing: 2 ... 6 Nm
Range of speed of rotation	Without gearing: up to 2000 rpm	Without gearing: up to 1000 rpm
Positioning resolution	0.036°	
Interfaces	Multifunctional interface for pulse/direction or A/B signals (encoder); service interface; 24 V signal interface; interface for “Safe Torque Off” safety function (“Power Removal”)	
Operating modes	Current reduction, blocking detection, I/O signal assignment	
Configuration	Via parameter switch: motor phase current, number of steps, phase current reduction, blocking detection, RS 485 terminating resistor, I/O signal assignment	

Supply voltage
Lexium Integrated Drives IL●1 can be operated with a supply voltage of 24 V⎓ or 36 V⎓.