



POSITIONING SYSTEM

LSMART *express*

One compact controller unit with master
and four integrated powerful drives for

- ✓ servo motors
- ✓ linear motors
- ✓ torque motors
- ✓ DC motors
- ✓ stepper motors



PRECISION IS OUR WORLD...



One Controller unit – Many possibilities!

The devices of the LSMART express product family consist of an intelligent master and four powerful drives with continuous output power of up to 400 W and considerable higher short time peak power. Through the wide range of functionalities a huge scope of applications are enabled by this synchronous point to point positioning systems. This can easily be achieved by using the appropriate parameters and instructions of the extensive command set.

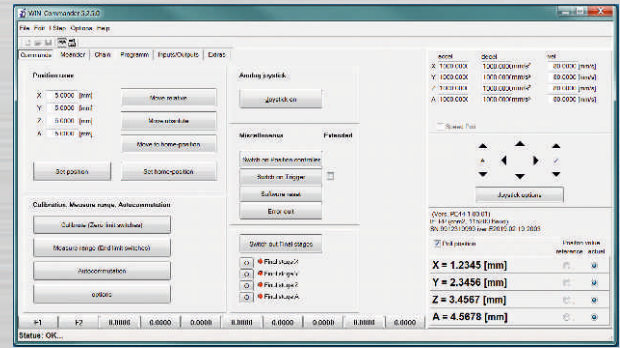
The integrated drives are able to operate 2- and 3-phase synchronous motors in field-oriented position control and step mode with a microstep resolution that is market-leading. In stepping mode a position control is also available, by choosing adaptive control similar dynamic to field oriented control is possible. Further on DC-motors can be driven in position control.

Smooth and dynamic movements can be achieved through separately adjustments of acceleration and deceleration phase considering the desired speed and jerk.

Depending on the application area the controller is available as stand-alone or cabinet housing, PCI express plug-in module and completely assembled in IPC. A wide range of equipment options provides more flexibility, to adapt the system for individual needs. The free LANG API allows the integration into your own software environment. Controllers from LANG are also available as OEM device with clients company logo.

The free software WIN-Commander also allows user-specific configuration of the system and drive of the applications. Thus all different requirements can be realized flexibly according to individual needs with one single positioning system.

LANG also offers motors, complete axes and handling systems – everything from one source!



WIN-Commander – main menu



WIN-Commander – oscilloscope

Application areas:

- Handling machines
- Machinery- and plant engineering
- Mechanical engineering
- Measurement and testing technology
- Microscopy
- Imaging systems
- AFM microscopy
- Waferinspection and waferhandling
- Test and analyzer systems
- Micro assembling
- Laboratory automation
- Medical technology
- Image processing
- Clean room applications

Technical Data

Axes:	drives for up to 4 axes on board
Resolution:	max. 1.638.400 microsteps per motor revolution for a 200-step motor
Power supply:	stand alone housing – main connection cabinet housing – external 48V-power supply PCI express plug in module – supply from PC-power pack, intermediate voltage alternatively from an external power supply (12V - 48V)
Motor phase current:	up to 10 A continuous / 30 A short time (peak value)
Output-power:	up to 400 W continuous / > 1000 W short time per axis up to 2000 W continuous per device
User interface:	WIN-Commander high-performance instruction set, compatible with the positioning systems of the LSTEP series
API:	DLL-interface for Delphi, Visual C++, Visual-Basic and LAB-View

Options

Joystick:	Joystick for 3 axes
Motor – cable:	Motor cable for different motor types available (Plug & Play)
Encoder inputs for:	up to eight sin/cos encoder (8192-fold interpolated) up to four TTL/RS422 encoder (4-fold interpolated)
Digital I / Os:	up to 32 inputs and 32 outputs
Multifunctionport:	2 path synchronous trigger outputs, Snapshot input, Stop input (shut down of amplifiers), Pulse direction outputs for 2 further axis, 10 analog inputs, 2 analog outputs, 2 PT 100-Interface