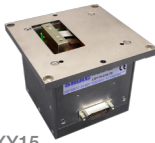# XY STAGES, CONTROLLERS & AMPLIFIERS

LXY15
Stroke [mm]: 15
Force [N]: 22

LXY25
Stroke [mm]: 25
Force [N]: 42

VLC
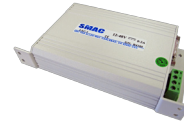"Very Low Cost" single or 2-axis DC brushed/ brushless motor controller/driver

CBC / CBC-I-3/6
Single-axis miniature controller with a built-in amplifier

CBC-EIP / CBC-ECT
Integrated single axis servo motor controller/ driver with Ethernet/ IP and EtherCAT connectivity

LCC-10 (LCC-11)
Single-axis brushless controller with built-in amplifier

LAC-1
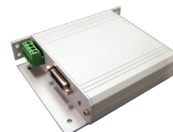Single-axis controller with a built-in amplifier

LAC-25
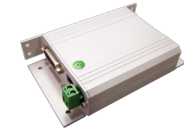2-axis controller with a built-in amplifier

LAC-26
2-axis controller with a built-in amplifier

MC-2
Master Controller with up to 127 axis

LAD-1
Single-axis smart driver

MIOE-8/8
Expansion I/O module for LAC-1, LAC-25 and LAC-45

XY STAGES | LXY SERIES

The LXY have the advantage of independent control of the velocity, acceleration, positioning and force of each axis. This gives you a flexible and accurate tool.

✓ Precise force control, measuring and positioning
✓ Soft-Land™ capability for sensing product location and dimensions
✓ No backlash, no cogging

| Part Number | Voltage [DC] | Size: LxWxH [mm] | Stroke per Axis [mm] | Axis 1 | | | | Axis 2 | | | | Maximum Current [Amp] | Weight [kg] | Maximum Opening |
				Peak Force [N]	Continuous Force [N]	Force Constant [N/A]	Moving Mass [kg]	Peak Force [N]	Continuous Force [N]	Force Constant [N/A]	Moving Mass [kg]			
LXY15-015-75-1	48	111x112x86	15	22	11	13	0.13	25	12	12	0.22	2.2	1.65	N/A
LXY25-025-75-2	48	125x125x65	25	42	17	14	0.19	42	17	14	1.5	3	3.2	N/A

NOTE: For any SMAC Moving Coil Actuators, the maximum recommended continuous duty current is 600mA supplied to the actuator over a 1 second period. For anything beyond this in terms of current draw or time please consult the factory. We manufacture actuators to suit our customers' requirements. Please call us if you do not find the right actuator in this list. (*)Consult factory
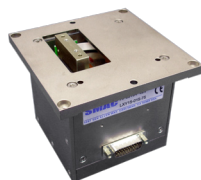
LXY15
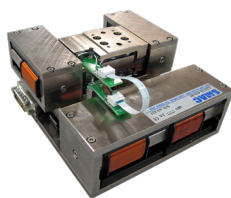
LXY25

SMAC supplies a range of single and multi-axis controllers as well as stand-alone amplifiers. Complimentary standard programming software is available on the SMAC website, http://www.smac-mca.com/products/controllers. SMAC supports connectivity with ethernet fieldbuses like EtherCAT and Ethernet /IP on certain models. Please contact us for more information.

GUI

VLC-M1

"Very Low Cost" single axis servo motor controller/driver, designed and manufactured by SMAC. 3-Phase Brushless, DC Brushed, DC linear actuator.

Mode: Position/Velocity/Force/Soft-Land

8–50VDC
3.5 Arms continuous, 6.5 Arms peak
1 analog input, 0-10V range, 12 bit
2 PLC level opto isolated digital outputs 5 to 24V
2 SSR (solid state relay) isolated digital inputs 5-24V
RS232

GUI

VLCI-R1

"Very Low Cost" single axis servo motor controller/driver, designed and manufactured by SMAC. 3-Phase Brushless, DC Brushed, DC linear actuator. Can be integrated into actuators.

Mode: Position/Velocity/Force/Soft-Land

8-48VDC
3.5 Arms cont., 6.5 Arms peak
2 differential analog inputs,12 bit
4 PLC level opto isolated digital outputs 5 to 24V
4 SSR (solid state relay) isolated digital inputs 5-24V
STO (Safe Torque Off)
2 STO Opto-Isolated Inputs 5-24V
1 STO Opto-Isolated Feedback Output 5-24V
Analog Outputs 1 Channel, 0 to 10V with 12-Bit Resolution
RS232

GUI

VLCC-25-07

"Very Low Cost" two-axis servo motor controller/driver, designed and manufactured by SMAC. 3-Phase Brushless, DC Brushed, DC linear actuator.

Mode: Position/Velocity/Force/Soft-Land

8-48VDC
6 Arms cont., 7.8 Arms peak
10 Arms cont., 13 Arms peak output optional (consult factory)
4 PLC level opto isolated digital outputs 5 to 24V
4 SSR (solid state relay) isolated digital inputs 5-24V
2 Opto-Isolated Coarse Home Inputs
2 STO Opto-Isolated Digital Inputs, 5V to 24V Max
1 STO Opto-Isolated Feedback Output 5-24V
2 12-Bit Differential Analog Inputs, 0 to +/- 10V Range
3 12-Bit Analog Inputs, 0V to 10V Range
2 12-Bit Analog Outputs, OV to 10V Range (0V to 5V Optional)

GUI
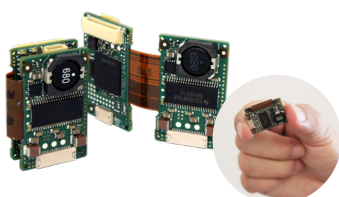
CBC

Single-axis miniature controller with a built-in amplifier. Single-phase/brushed and 3-phase/brushless motors/actuators.

Mode: Position/Velocity/Force/Soft-Land

8-48VDC
3 Arms cont., 6 Arms peak
2 PLC level (24V) non-isolated digital inputs
2 Open drain digital outputs*
1 single-ended analog input, 0-5VDC, 10-bit
1ms position loop sampling rate
Built-in configurable I^2T function to prevent overheating
RS232, CANopen

* Consult factory for opto-isolated I/O options.

GUI

CBC-I-3/6-C

Single-axis miniature controller with a built-in amplifier. Single-phase/brushed and 3-phase/brushless motor/actuators

Mode: Position/Velocity/Force/Soft-Land

8-48VDC
3 Arms cont., 6 Arms peak
4 PLC level opto isolated digital outputs 5-24V
4 SSR (solid state relay) isolated digital inputs 5-24V
1 single-ended analog input, 0-5Vdc, 10-bit
2 STO opto-isolated inputs 5-24V
1 STO poto-isolated feedback output (optional)
1ms position loop sampling rate
Built-in configurable I^2T function to prevent overheating
RS232, CANopen

GUI

CBC-EIP / CBC-ECT

Industrial EtherNet-ready servo drives. Integrated single-axis servo motor controller/driver with Ethernet/IP (CBC-EIP) or EtherCAT (CBC-ECT) connectivity.

Mode: Position/Velocity/Force/Soft-Land

8-48VDC
3 Arms cont., 6 Arms peak
4 PLC level opto isolated digital outputs 5 to 24V
4 SSR (solid state relay) isolated digital inputs 5-24V
1 5V output supply for powering external circuitry
1 0-5V single ended analog input
2 STO inputs, isolated inputs 5-24V
1 STO feedback output (optional) 5-24V
External diagnostics capability
Abnormal operation detection
RS232, Ethernet/IP (2-port) or EtherCAT (2-port)
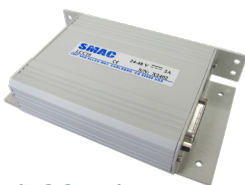
GUI

LCC-10 (LCC-11)

Single-axis controller with a built-in amplifier. Single-phase/brushed and 3-phase/brushless motors/actuators.

Mode: Position/Velocity/Force

24-48VDC
2 Arms cont., 4 Arms peak
4 TTL compatible non-isolated digital inputs/outputs*
1 single-ended analog input, 0-5VDC, 12-bit
1 differential analog input, -/+10VDC, 12-bit
1 analog output.
LCC-10: 0–5VDC, 10-bit.
LCC-11: 0–10VDC, 16-bit.
1ms position loop sampling rate
Built-in configurable I^2T function to prevent overheating
Can be run as amplifier only, velocity drive and Step & Direction Emulator
RS232, CANopen

GUI

LAC-1/LAC-1C/LAC-1D

Single-axis controller with a built-in amplifier. Single-phase/brushed motors/actuators.

Mode: Position/Velocity/Force

12-48VDC
3 Arms cont., 6 Arms peak
8 TTL compatible non-isolated digital inputs/outputs*
3 analog inputs. LAC-1/LAC1-C: 0-5VDC and 10-bit.
LAC-1D: programmable voltage range and 16-bit.
Max. position loop sampling rate. LAC-1: 0.2ms. LAC-1C/LAC1-D: 0.1ms.
RS232

GUI

LAC-25

2-axis controller with built-in amplifiers. Independent or coordinated 2-axis motion. Single-phase/brushed motors/actuators (axis 1 and 2)
Mode: Position/Velocity/Force/Gearing

12-48VDC
3 Arms cont./axis, 6 Arms peak/axis
4 SSR (solid state relay) isolated digital inputs 5-24V
4 PLC level opto isolated digital outputs 5 to 24V
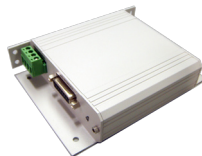Max. position loop sampling rate of 0.1ms per axis
RS232

MC-2

CANopen-based master controller enabling multi-axis (up to 127) motion coordination of SMAC's LCC/CBC controllers. Additionally, the master controller can act as a gateway to a PLC through Ethernet/IP.
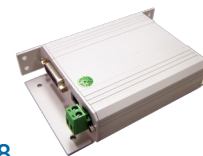
LAD-1

Smart Driver for single-axis stepper input to servo output
24-48VDC
RS232

LAA-5

Single-axis PWM Amplifier
24-48VDC
3 Arms cont., 6 Arms peak
+/- 10 Volt command input
Single-axis PWM Amplifier

MIOE-8/8

Expansion I/O module for LAC-1, LAC-25 and LAC-45
24-48VDC
8 opto-isolated input/output