

AEROTECH AUTOMATION1

High-Speed, Single-Phase Linear Servo Drive **Automation1 XL4s**

Superior Control for High-Speed Applications

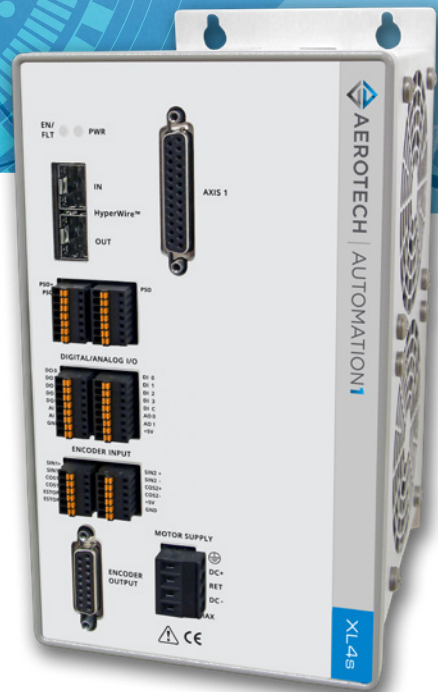
A high-performance linear amplifier for single-phase motors, the XL4s digital drive eliminates non-linearities common to PWM amplifiers. It offers deterministic behavior, auto-identification and easy software setup. Advanced features—including full state feed-forward, 200 kHz servo rates and look-ahead-based velocity control—allow you to achieve industry-leading settling times, long-term thermal stability and sub-micron-level tracking accuracy.

Thanks to an industry-leading servo rate of 200 kHz, you'll see better tracking performance and part quality at high speeds in applications such as fast-tool servos, high-dynamic optical focusing axes and high-speed pick-and-place machines.

Automation1

The XL4s is a part of the user-friendly Automation1 motion control platform, which includes the following:

- ◆ **Development Software**
- ◆ **Controls**
- ◆ **Motor Drives**
- ◆ **Fiber-Optic HyperWire® Communication Bus**



KEY FEATURES:

- ◆ Provides **CLOSED-LOOP SERVO CONTROL** of voice-coil & single-phase motors
- ◆ Connects over HyperWire® fiber optic interface
- ◆ Features **INDUSTRY-LEADING 200 KHZ SERVO LOOP** update rate
- ◆ Offers **CUSTOMIZABLE CURRENT LOOP** configurations available to meet your application requirement
- ◆ Includes standard **THREE-AXIS POSITION SYNCHRONIZED OUTPUT (PSO) & THREE-AXIS PART-SPEED PSO**
- ◆ Follows EU 2015/863 RoHS 3 directive, is CE approved & NRTL safety certified

AUTOMATION1 XL4s GENERAL SPECIFICATIONS

FEATURE	DESCRIPTION
Motor Style	±40 VDC max
Control Supply	85-240 VAC; 50-60 Hz
Digital Inputs	Four optically isolated
Digital Outputs	Four optically isolated
Analog Inputs	One 16-bit differential; ±10 V
Analog Outputs	Two 16-bit single-ended; ±10 V
Emergency Stop Sense Input (ESTOP)	Standard; 24 V opto-isolated
Position Synchronized Output (PSO) ⁽¹⁾	Standard: Three-axis PSO, Three-axis Part-Speed PSO
Interpolated Feedback Output	Yes
Communication Bus	HyperWire® fiber-optic interface
Operating Temperature	0 to 50°C
Storage Temperature	-30 to 85°C
Weight	2.9 kg
Servo Loop Rate	200 kHz
Compliance	CE approved, NRTL safety certification, EU 2015/863 RoHS 3 directive

Note:

1. Three-axis PSO is only available with Automation1 V2.4.0 and later. For V2.3.2 and older, including all A3200 controllers, Two-axis PSO is standard.



AUTOMATION1 XL4s ORDERING OPTIONS

XL4s Series (Required)

XL4s Single-phase linear amplifier

Current (Required)

-20 20 A peak; 5 A continuous



AUTOMATION1 XL4s DIMENSIONS

