



## Automation1-XC4e Specifications

Specifications	10	20	30
Motor Style	Brush, brushless, voice coil, stepper <sup>1</sup>		
Motor Supply	Single-phase 0-240 VAC; 50/60 Hz		
Control Supply	100-240 VAC; 50/60 Hz		
Bus Voltage <sup>2</sup>	0-340 VDC		
Peak Output Current (1 sec) <sup>3</sup>	10 A <sub>pk</sub>	20 A <sub>pk</sub>	30 A <sub>pk</sub>
Continuous Output Current <sup>3</sup>	5 A <sub>pk</sub>	10 A <sub>pk</sub>	
Digital Inputs	4x optically isolated (additional available with -EB1 I/O expansion board, see below)		
Digital Outputs	4x optically isolated (additional available with -EB1 I/O expansion board, see below)		
High-Speed Inputs	2x optically isolated		
Analog Inputs	1x 16-bit differential ±10 V (additional available with -EB1 I/O expansion board, see below)		
Analog Outputs	1x 16-bit single-ended; ±10 V (additional available with -EB1 I/O expansion board, see below)		
Position Synchronized Output (PSO)	Standard: One-axis PSO (includes one-axis Part-Speed PSO)  Optional: Two-axis PSO (includes two-axis Part-Speed PSO) Three-axis PSO (includes three-axis Part-Speed PSO) Two-axis Part-Speed PSO only Three-axis Part-Speed PSO only		
25-Pin Motor Feedback Connector	High-speed differential inputs (encoder sin, cos and marker)* CW and CCW limits Hall effect sensor inputs (A, B, and C) Analog motor temperature input (accepts digital) Brake output		
26-Pin Auxiliary Feedback Connector	High-speed differential inputs (encoder sin, cos and marker)* Contains the digital inputs and digital outputs listed above Contains the high-speed inputs listed above Contains the analog inputs and analog outputs listed above *This channel is bidirectional, and can be used to echo out encoder signal		
Multiplier Options	MX0; no encoder multiplier includes: Primary encoder 40 million counts-per-second square-wave input Auxiliary encoder 40 million counts-per-second square-wave input  MX2; MX2 encoder multiplier includes: Primary encoder 2 MHz sine-wave input, encoder multiplier up to x65,536 Auxiliary encoder 40 million counts-per-second square wave input.  MX3; MX3 encoder multiplier includes: Primary encoder 2 MHz sine-wave input, encoder multiplier up to x65,536 Auxiliary encoder 450 kHz sine-wave input, encoder multiplier up to x16,384		
I/O Expansion Board (-EB1)	1x additional PSO connection point 1x PSO synchronization Input 16x digital inputs, optically isolated 16x digital outputs, optically isolated 3x analog inputs, 16-bit, differential, ±10 V 3x analog outputs, 16-bit, single-ended, ±10 V		
Drive Array Memory	16,777,216 32-bit elements		
High-Speed Data Capture	Yes (50 ns latency)		
Safe Torque Off (STO)	Yes, SIL3/PLe/Cat 4		
HyperWire Connections	2x HyperWire small form-factor pluggable (SFP) Ports		
Automatic Brake Control	Standard; 24 V at 1 A		
Absolute Encoder	Renishaw Resolute BiSS; EnDat 2.1; and EnDat 2.2		
Current Loop Update Rate	20 kHz		
Servo Loop Update Rate	8 kHz		
Power Amplifier Bandwidth	Selectable through software (85-95% efficiency)		
Minimum Load Inductance	0.1 mH		
Operating Temperature	0 to 40°C		
Storage Temperature	-30 to 85°C		
Weight	2.36 kg (5.20 lb.)		
Compliance	CE approved, NRTL safety certification, 2011/65/EU RoHS 2 directive		

1 For stepper motors only, one-half of bus voltage is applied across the motor (e.g., 80 VDC supply results in 40 VDC across stepper motor).

2 Output voltage dependent upon input voltage.

3 Peak value of the sine wave; rms current for AC motors is 0.707 \* Apk.





## Automation1-XC4e **Ordering Information**

### XC4e

XC4e	XC4e PWM digital drive
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### Peak Current

-10	10 A peak, 5 A cont. current (default)
-20	20 A peak, 10 A cont. current
-30	30 A peak, 10 A cont. current

### Expansion Board

-EB0	No expansion board (default)
-EB1	IO expansion board

### Multiplier

-MX0	No encoder multiplier (default)
-MX2	2 MHz x65536 multiplier (primary), no multiplier (auxiliary)
-MX3	2 MHz x65536 multiplier (primary), 450 kHz x16384 multiplier (auxiliary)

### PSO

-PSO1	One-Axis PSO (default)
-PSO2	Two-Axis PSO
-PSO3	Three-Axis PSO
-PSO5	Two-Axis Part-Speed PSO
-PSO6	Three-Axis Part-Speed PSO

### External Shunt

-SX0	No 2-pin connector for external shunt (default)
-SX1	2-pin connector for external shunt