



ARTECO

MOTION CONTROL TECHNOLOGIES

SU112

SU112 is a 2-axis Numerical Control unit with integrated PLC programmable by IEC 61131-3 standard, fitted with 16 inputs and 16 outputs, expandable up to 48 inputs and 48 outputs on-board and from 2 to 5 interpolated axes.

The operator terminal allows to control the display, buttons and LEDs via the application software, ensuring extremely flexible use. Arteco Motion Tech has developed a comprehensive library of functions specifically dedicated to axis movement that ensures important integration with available programming languages.



CHARACTERISTICS	DESCRIPTION	NOTES
Power supply requirements		
Power supply voltage	24 Vdc \pm 20%	
Absorption	1.5 Amps max	
Buffer battery	CR2032 -3.0Volts	
Voltage monitoring	24Vdc, 5 Vdc, 12 Vdc, -12 Vdc	LEDs lit indicate correct voltage level
Configuration		
"Blind" with operator interface	"Blind" for control panel mounting	
Operator interface		
Display	STN 128x64 Graphic	Controllable via application software
Keyboard	40-key keyboard: 25 controls, 7 functions, 8 configurable	3 unit diagnosis LEDs 8 keys with associated LEDs, controllable via application software
CPU		
Microprocessor	RISC 40MHz 16 bit	
Available working memory	RAM 600Kbyte	Buffered, writing protected for power down and reset
External memory	1 Megabyte Sim Card	For upload / download of firmware and/or application software
Monitoring functions	Card OK PLC active Application software active	LED lit for unit running 24 Vdc output LED flashing for PLC running LED flashing for application software running
Interfaces		
Asynchronous serial basic	1 RS232/RS485 line	Both available
Inputs & Outputs		
On-board digital user inputs	16 24 Vdc PNP inputs	Protection equivalent to opto-isolation
On-board digital user outputs	16 24 Vdc PNP outputs 1.8 Amp/output, Max 4.4 Amps on each group of 4 outputs	Protection equivalent to opto-isolation Protected against short-circuits, over-current, over-heating, over-voltage, power voltage inversion
On-board analog user inputs	1 0-10Volt analog input	10-bit resolution, protected against over-voltage
Axis control		
Number of axes	5 analog axes	
Analog reference	\pm 10Volt	12-bit resolution
Encoder counting	400 kHz, 32 bit	Multiplied by 4 internally
Encoder interface	Push Pull, Line Driver, 5Vdc	Jumper-selectable
Axis monitoring	Watchdog End-of-stroke	Axes disabled in the event of alarm Hardware & Software
Scanning time	8 msec for 5 axes	Modifiable via application software
Motion control	PID or Feed-Forward	Available via software
Multi-axis performance	Automatic positioning offset calibration Linear interpolation S-ramp Rotary axis control Electric axis	With DSP expansion
	Circular interpolation Electronic cam (also Boolean) Circle arc blending NURBS Spline Optimized blending Self-learning and re-running	
Expansions		
Expansion slots	4 slots available	
Development tools		
Development environment	ISaGRAF®	Compliant with IEC 61131-3
Languages available	SFC, FDB, LD, ST, IL, FC	
Advanced performance	Function blocks for axis control	Over and above IEC 61131-3 standard
	Function blocks for advanced control of variables	Over and above IEC 61131-3 standard
	Block for controlling user keyboard, display and LEDs	Over and above IEC 61131-3 standard
	Modbus	
General Features		
Field connections	Via separable terminal strip 9-pole Cannon Sub-D connector	
Case	Screened	Dimensions in mm.: 207 x 182 x 87 (analog axis version) Dimensions in mm.: 207 x 182 x 118 (internal drive version)
Assembly	Panel mounted	
Conformity	CE EN 50081/2, EN50082/2	Self-certified

8 IN 8 OUT EXPANSION

CHARACTERISTICS	DESCRIPTION	NOTES
On-board digital user inputs	8 24 Vdc PNP inputs	Protection equivalent to opto-isolation
Digital user outputs	8 24 Vdc PNP outputs 1.8 Amp/output, Max 4.4 Amps on each group of 4 outputs	Protection equivalent to opto-isolation Protected against short-circuits, over-current, over-heating and over-voltage, power voltage inversion
Assembly	On any expansion slot	

8 IN 8 OUT SERIAL CAN EXPANSION

CHARACTERISTICS	DESCRIPTION	NOTES
Digital user inputs	8 24 Vdc PNP inputs	Protection equivalent to opto-isolation
Digital user outputs	8 24 Vdc PNP outputs 1.8 Amp/output, Max 4.4 Amps on each group of 4 outputs	Protection equivalent to opto-isolation Protected against short-circuits, over-current, over-heating and over-voltage, power voltage inversion
Asynchronous serial basic	1 RS232/RS485 line	Both available, jumper-selectable
Fieldbus	CANOpen	Master Mode
Assembly	On dedicated position 1 slot	

1-AXIS ANALOG EXPANSION

CHARACTERISTICS	DESCRIPTION	NOTES
Analog reference	± 10Volt	12-bit resolution
Encoder counting	400 kHz, 32 bit	Multiplied by 4 internally
Encoder interface	Push Pull, Line Driver, 5Vdc	Jumper-selectable
Axis monitoring	Watchdog End-of-stroke	Axes disabled in the event of alarm Hardware & Software
Motion control	PID or Feed-Forward	Available via Software
Axis performance	Automatic offset calibration Positioning Linear interpolation S-ramp Rotary axis control Electric axis	With DSP expansion
	Circular interpolation Electronic cam (Boolean too) Circle arc blending NURBS Spline Optimized blending Self-learning and re-running	
Assembly	On dedicated position 2 slot	

2-AXIS ANALOG EXPANSION

CHARACTERISTICS	DESCRIPTION	NOTES
Analog reference	± 10Volt	12-bit resolution
Encoder counting	400 kHz, 32 bit	Multiplied by 4 internally
Encoder interface	Push Pull, Line Driver, 5Vdc	Jumper-selectable
Digital user inputs	2 24 Vdc PNP inputs	Protection equivalent to opto-isolation Can also be used for position capture by means of interrupt
Axis monitoring	Watchdog End-of-stroke	Axes disabled in the event of alarm Hardware & Software
Motion control	PID or Feed-Forward	Available via Software
Axis performance	Automatic offset calibration Positioning Linear interpolation S-ramp Rotary axis control Electric axis	With DSP expansion
	Circular interpolation Electronic cam Circle arc blending NURBS Spline Optimized blending Self-learning and re-running	
Assembly	On dedicated position 4 slot	