



SPECIFICATIONS

AMC4

ADVANCED MACHINE CONTROLLER

Multi-axis motion controller/machine controller with integral DC brushed servo motor drives or stepper motor drives

AMC4 stepper

The AMC4 stepper controller is capable of controlling the motion of up to 4 stepper axes with an integral PLC and analogue output functionality. The AMC4 can be supplied with internal stepper drive amplifiers in a single enclosure and combined with a front panel interface.

Stepper controllers are ideally suited to a range of applications requiring the positioning of light to medium loads at moderate speeds, where system cost is an issue and the cutting forces on the controlled tool head are low. Typical applications for the AMC4 stepper controller are small, table based systems. Such systems include plotting tables, routing/engraving tables where the amount of material being removed in a single pass is limited, liquid dispensing, data acquisition, pick and place and point to point applications.

AMC4 servo

The AMC4 servo controller is capable of controlling the motion of up to 4 servo axes with an integral PLC and analogue output functionality. The AMC4 servo controller can be supplied with internal brushed servo drive amplifiers in a single enclosure, combined with a front panel interface.

Servo motor controllers are suited to applications where the dynamic response needs to be high, the tolerances of the finished product are critical and the cutting forces on the



The AMC4 stepper controller primarily differs from the AMC3 stepper controller in that it supports an additional axis, extra I/O, an increased level of safety category and a graphical display. It can also be contained inside a dust sealed enclosure for more demanding environments.

controller tool head are high and variable. Typical applications for the AMC4 servo controller are large format routing systems controlling multiple high powered spindle motors, high speed plotting tables, laser, plasma or water-jet cutting machines.

The AMC4c variant controller differs from the AMC4 in that it is supplied with less I/O functionality and supports fewer hardware options.

Features

Drives (stepper)	Internal SD15M stepper drives. (5 Amp 60 Volt)
Drives (servo)	Internal servo drives.
Case	Standard NEE dust proof enclosure for 19" rack mounted unit.
Front Panel	27 key, 4 line alphanumeric display screen and 1 system Stop (Red Mushroom) switch.
Inputs	20 optically isolated inputs. (6 x 2 wire 9-Volt proximity, 4 high speed inputs and 10 standard inputs compatible with 24 vdc levels or volt free contacts) (AMC4c variants - lower specifications)

Outputs	12 optically isolated outputs rated at 24 vdc sourcing up to 250 mA each, maximum total output current 2 amps. (AMC4c variants - lower specifications)
Analogue	1 x 11 bit isolated analogue output.
Safety	Fitted with components to Category 3 safety level.
EMC	EMC compliant.
CE Mark	CE certified.
Memory	5-year battery backed RAM as standard, 150K User Memory.

Technical Specifications

AMC4 ADVANCED MACHINE CONTROLLER

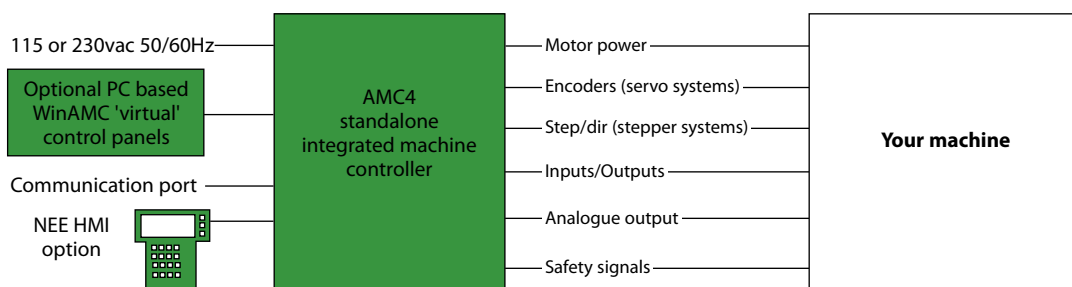
	AMC4C2	AMC4C	AMC4
Max. No. of Axes	2	5	5
Max. Servo Axes	2	4	4
Max. Stepper Axes (note: max. 1 stepper if 1 or more servo axes)	0	4	4
Max. internal drive power	700W	700W	1000W
Max. step or encoder frequency	4 MHz	4 MHz	400,000 stepper, 4 MHz ,servo
Encoder inputs (servo systems)	2	4	4
Motion DAC's (servo systems)	2	4	4
RS232 ports	1	1	1
Total user inputs	6	15	20
2 Wire Proximity Inputs (9 volt)	3	3	6
User Inputs (10 µS)	0	4	4
User Inputs (500 µS)	3	8	10
Total user outputs	5	7	12
60V 1A relay	3	3	0
User O/Ps 24VDC @ 0.25 Amp	2 @ 5mSec	4 @ 5mSec	12 @ 5mSec
24VDC User Output Supply	None	1 amp	1 amp
Analogue Output – 8 bit isolated	None	None	1
Internal Drive options	8 or 10 amp @ 50V or 60V Brushed DC	8 or 10 amp @ 50V or 60V Brushed DC	1.75 to 5amp 60V mini-stepping or 8 or 10amp 60V
Control Panel/Display & System STOP switch	27 Keys +4 pressure sensitive jog keys, 4 line graphic display	27 Keys + 4 pressure sensitive jog keys, 4 line graphics display	27 Keys + 4 pressure sensitive jog keys, 4 line alphanumeric display
Enclosure size (cm)	48 x 18 x 30	48 x 18 x 30	48 x 18 x 30
System weight	20 kg	21 kg	22 kg
Custom units to your specification	Yes	Yes	Yes
14.7 MHz processor	Yes (25 MHz*)	Yes (25 MHz*)	Yes (25 MHz*)
150 Kb Job memory	Yes (1.5 Mb*)	Yes (1.5 Mb*)	Yes (1.5 Mb*)

* Extra cost option

	AMC4C2	AMC4C	AMC4
Extra 24 Inputs, 24 Outputs	No	No	Yes*
HMI Interface	No	Yes	Yes
Axis motor brakes (24 volt DC @ 0.5 amp)	No	No	Up to 4
Automatic Height Control system	0	2	2
Internal Optical Fibre data interface	Yes	Yes	Yes
Pulsed Laser power control output (160Hz to 10kHz)	No	0	Yes (Servo)*
Integral Drive power supply	Yes	Yes	Yes
Safety relays (Meets Machine Safety Regulations Cat 3)	Yes	Yes	Yes
Remote Keypad + Graphics display, 'pulse wheel' jog	No	No	Yes*
Logic and Opto power supply	Yes	Yes	Yes
Control panel complete	Yes	Yes	Yes
Cased system	Yes	Yes	Yes
PC based servo tuning analysis	Yes	Yes	Yes
Graphic Display (256 x 64 pixels mono)	Yes	Yes	Yes*

Firmware options			
WinAMC Interface	Yes	Yes	Yes
3D Capability	No	Yes*	Yes*
Tangential axes	0	2*	2*
Teach mode (digitise)	Yes *	Yes*	Yes*
Tool length/diameter offsets (Kerf offsets)	Yes*	Yes*	Yes*
Backup and Skip	Yes	Yes	Yes*
Encoder Following	No	Yes	Yes
Inkjet printer interface	No	Yes (Servo)*	Yes (Servo)*
Customer specific menu structure	Yes*	Yes*	Yes*
Closed loop spindle control	No	Yes	Yes
Laser pulse triggering based on distanced moved	No	Yes*	Yes*
Error Compensation Mapping	Yes*	Yes*	Yes*

Typical System



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