

MACIA2 Controller Board for KBioSystems - Overview

NOTE – THIS INFORMATION IS “PRE-RELEASE DRAFT”.

The MACIA2 Controller Board has been designed to incorporate all common functions across the KBiosystems product range.

With this one board being fitted to plate sealers, evaporators, plate handlers etc., inventory costs are reduced and software development and maintenance are simplified.

At its heart, the MACIA2 is an ARM microprocessor-controlled dual stepper motor driver, giving two axis of motion.

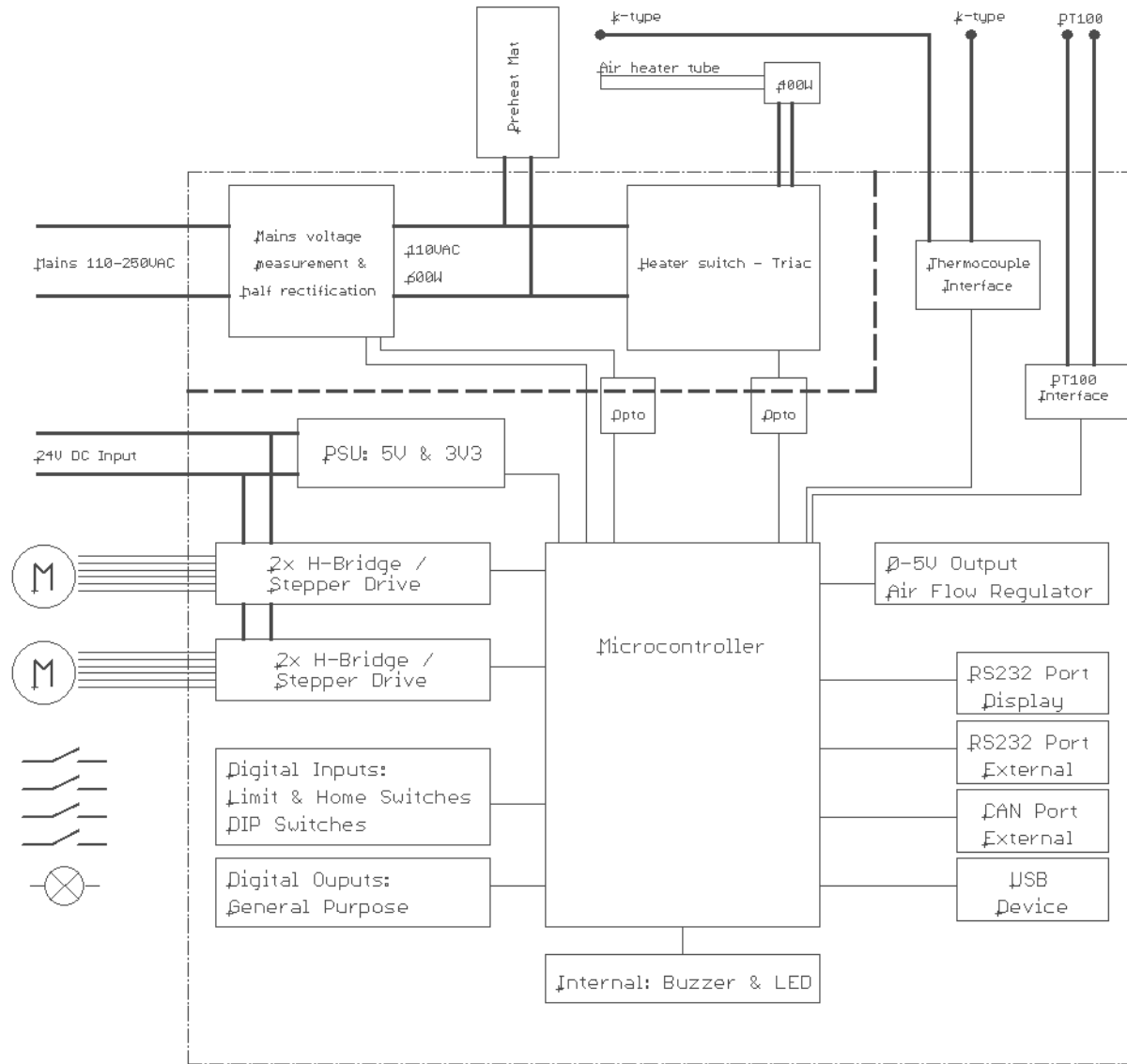
To support the two axis of motion, the MACIA2 also includes position encoder interfaces; RS232, CAN and USB device interfaces for peripherals such as touch-screen displays and bar code readers; analogue voltage outputs to control flow valves; analogue voltage inputs to measure various sensors; temperature sensor inputs; and an EEPROM to store parameters and data even when switched off. Similarly, the internal real-time clock is battery-backed to ensure accurate time-stamping of data. To attract the user’s attention, a beeper is included.

To enable the use of KBiosystems around the world, the MACIA2 incorporates 240V / 110V AC detection and automatically switches accordingly. The heaters used internally in KBiosystems products are monitored by the MACIA2, measuring the current delivered to them to detect fault conditions.

The software incorporated within the MACIA2 is written in ‘C’, with low-level functions (such as stepping the motors) being self-contained and distinct from top-level software state machines for ease of maintenance. The compiler toolchain used for the MACIA2 processor is well-supported, works across Windows, MAC and Linux, and is cost-free.

This description is DRAFT and may change at any time.

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