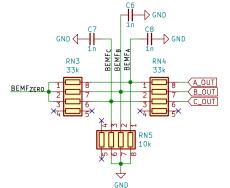


phases are connected to high and low, then the third floats [between them].

Let's say phase A is connected high, B is low, and C is left floating (not connected to either power level) — but was previously high.

The floating voltage starts close the previous extreme it was connected to, (high for C) then as the motor rotates through the step it will be pulled toward the other extreme in a roughly linear fashion.

When this floating voltage crosses the average of all three phases ("zero"), we are halfway through a commutation step, so we wait an equivalent amount of time from the previous commutation to the zero crossing before going to the next step. This is all handled by the MCU and its peripherals.



+BATT

GND

MAX TOI:

20V

100A

Programming Headers

The MCU is programmed by default using UPDI, but a bootloader can be programmed so that it can be programmed like other Arduinos using UART.

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There are connectors for both of these.

ATtinv1617 based BEMF ESC for BLDC

Designed for 10 to 20V input, current up to 100A Controlled primarily by I2C but can run with PWM

Same as V4 but with different MOSFET driver and status LED

Title: Sensorless	BLDC ES	C V5
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Savo Bajic	Date:	2022-01-20	Rev: 5	
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