

Sheet: Motor Driver

File: WiFi-Gate-Control-Board-Motor.sch

Sheet: Inputs

File: WiFi-Gate-Control-Board-Inputs.sch

Sheet: Outputs and LEDs

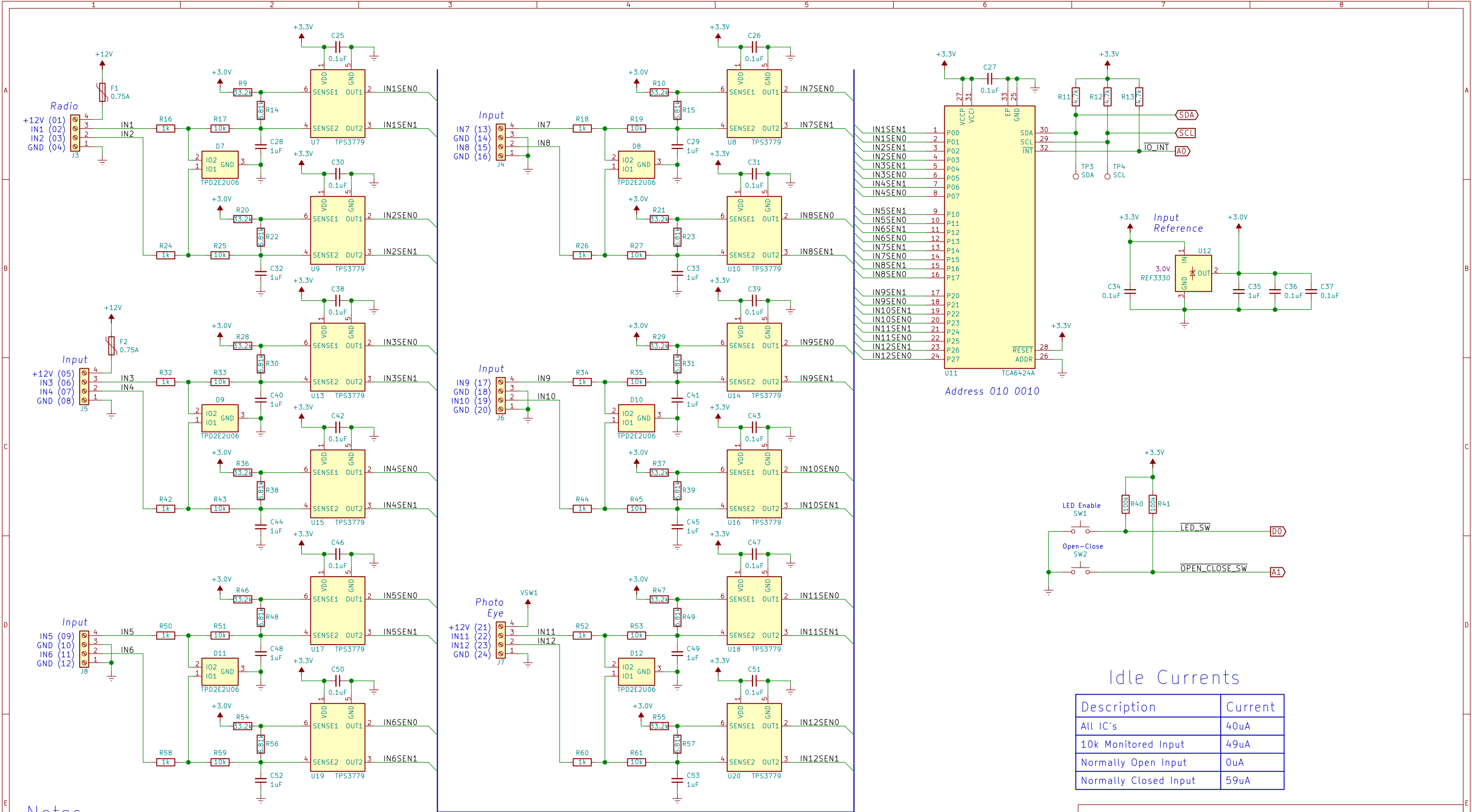
File: WiFi-Gate-Control-Board-Outputs.sch

Control Signals

PIN	NET	MCU Notes	Description
D0	LED_SW	Interrupt	LED Enable Pushbutton Input
D1	MEXTH		Motor Extend High
D2			Bootloader conflict
D3	MEN	PWM	Motor Enable
D4	MELIM	Interrupt	Motor Extend Limit Input
D5	MRLIM	Interrupt	Motor Retract Limit Input
D6	LED_GRN		Green Status LED
D7	LED_RED		Red Status LED
A0	IO_INT	Interrupt	IO Extender Interrupt
A1	OPEN_CLOSE_SW	Interrupt	Open-Stop-Close Pushbutton Input
A2			Unused
A3	LED_EN		Enable LEDs
A4			Unused
A5	MEXTL		Motor Extend Low
A6	MIS	ADC	Motor Current Sense

Notes

1. This board is compatible with the Arduino MKR1000 board which directly supports the ATWINC1500.
2. When the bootloader is running D2 is turned into an output at a logic '1'.

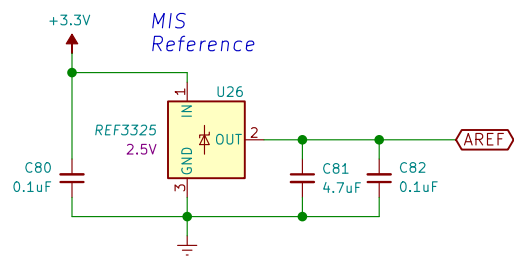
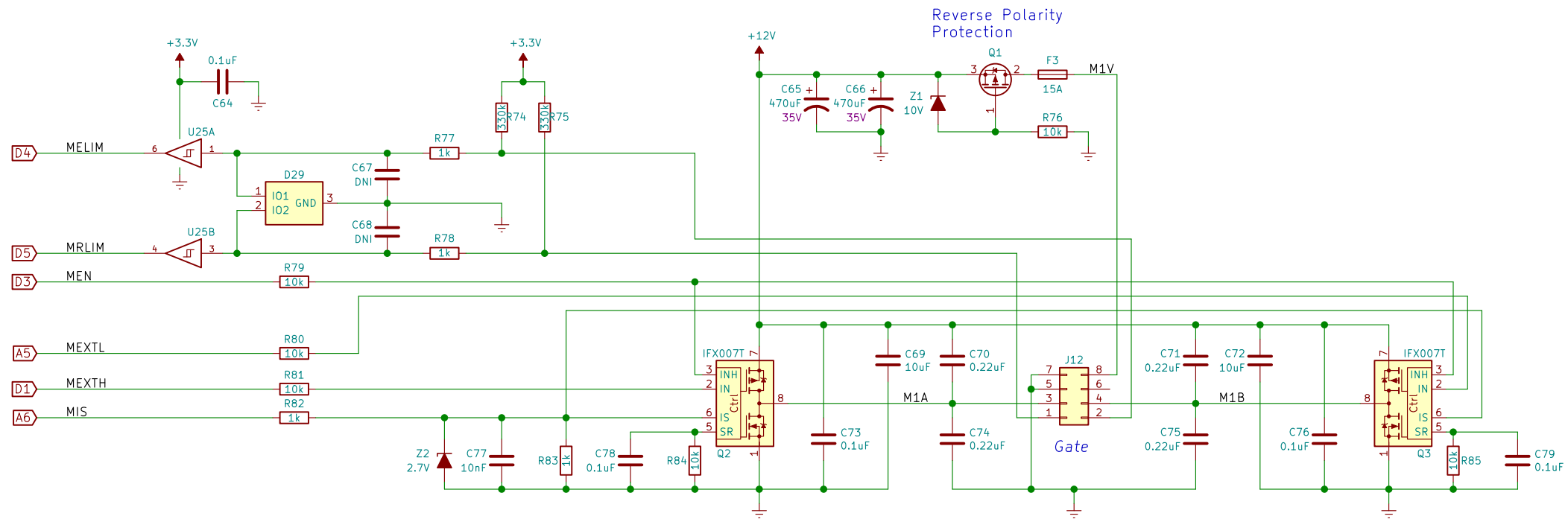


Notes

1. Each input supports Normally Open, Normally Closed, and 10k Monitered connections.

Idle Currents

Description	Current
All IC's	40uA
10k Monitored Input	49uA
Normally Open Input	0uA
Normally Closed Input	59uA



Motor Truth Table

MEN	MEXTH	MEXTL	Motor Action
L	X	X	Motor Off
H	L	L	Offset Measurement (Motor Off)
H	L	H	Motor Retracting
H	H	L	Motor Extending
H	H	H	Unused (Motor Off)

Idle Currents

Description	Current
All IC's	47uA

Notes

- When M1A is positive and M1B is negative actuator extends.

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