

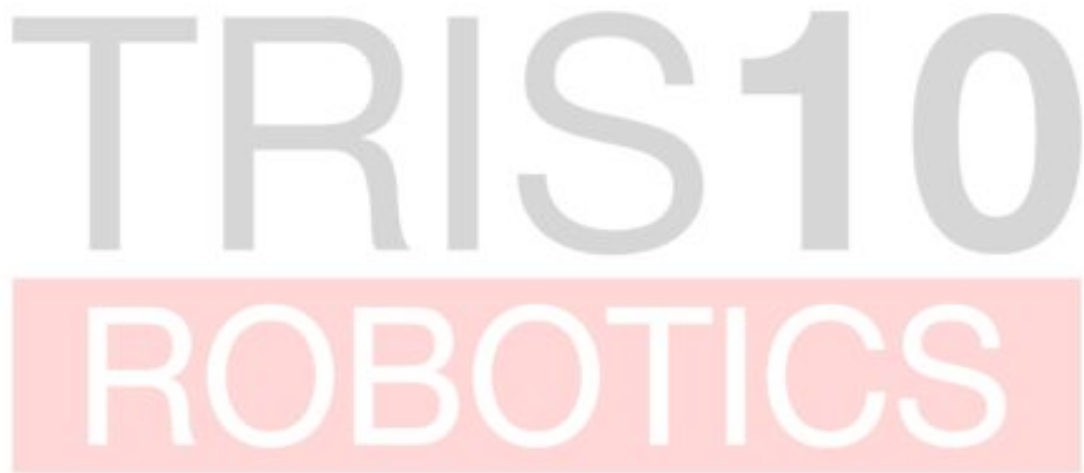
TRIS10



KickBall Controller

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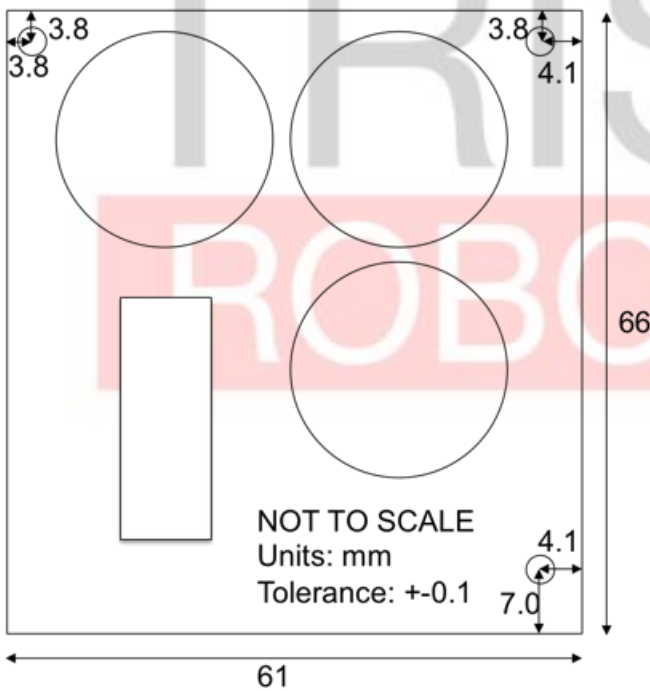
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1.0 Characteristics

Characteristic	Value	Units	Notes
V_{in} (recommended)	12 – 15	V	
V_{in} (absolute max)	24	V	
Kick Energy (12V)	2.2	J	$V_{in} = 12V$
Kick Energy (15V)	3.4	J	$V_{in} = 15V$
I_{max} (charging)	150	mA	$V_{in} = 15V$
V_{ana} (maximum)	$0.32 * V_{in}$	V	
V_{ana} (absolute min)	-26	mV	May occur for <70ms when kicking. Current correcting diode protects capacitors
Time Constant, τ	3.0	seconds	Time taken to reach 63.2% charge

2.0 Dimensions



3.0 Pin Descriptions

3.1 VIN (1 – closest to capacitor)

The input voltage – see 1.0 for recommended voltages. Must be able to draw 150mA if running off 15V.

3.2 GND (2)

The ground pin for both the input voltage and signal pins.

3.3 SIG (3)

The signal pin for kicking. This pin has an 82k pull-down and should be raised HIGH (minimum 3.3V, maximum 8V) to discharge the capacitors into the solenoid. To achieve optimal kick, it should be kept HIGH for 70ms or until ANA is 0.

3.4 ANA (4 – closest to resistor)

The charge of capacitors as an analog value. The maximum voltage will be $0.32 * V_{in}$. This value can be used when the capacitors are charging or discharging and can be used to optimise the kick duration or prevent underpowered repeat kicking.

