

37217-RL

Auto Reverse/Forward DC Motor Control

Working Voltage: DC 5-13V

Working Current: 5V: Forward: ~4ma/Reverse: ~36ma

12V: Forward: ~6ma/Reverse: ~44ma

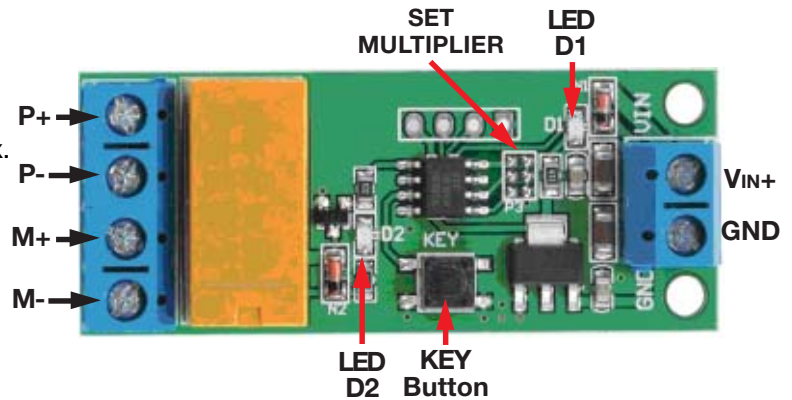
Relay Load Rating: 30VDC @ 2A max or 125VAC @ 1A max.

Recommend 5-12VDC Motor <2A

Forward time: up to ~5000 sec. (X1) to ~40000 (X8)

Reverse time: up to ~5000 sec. (X1) to ~40000 (X8)

NOTE: X Multiplier Applies to Both Forward & Reverse



General:

D1 is Setup LED Indicator

D2 is Operation LED Indicator (Relay Status)

VIN is connected to the Positive (+) terminal of the Board power supply, DO NOT MISWIRE

GND is connected to the Negative (-) terminal of the Board power supply. DO NOT MISWIRE

P+ is connected to the positive Terminal of the Motor power supply.

P- is connected to the negative Terminal of the Motor power supply.

NOTE: Motor does not distinguish between positive and negative terminals (Forward/Reverse is Relative to your connections & needs).

M+ is connected to one motor input terminal.

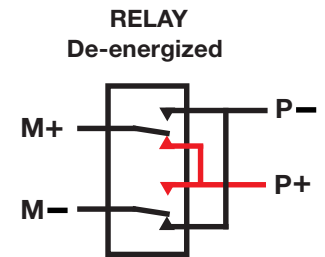
M- is connected to the other motor terminal.

Upon "Power-on", LED D1 flashes 3 times and then turns off, LED D2 turns off, **M+** output is positive, **M-** output is negative, the motor is running "Forward"; after Forward running for T1 time, D2 turns on, **M+** output becomes negative, **M-** output becomes positive, and the motor rotation is Reversed.

After Reverse running for T2 time, running sequence is reversed: (Motor is now rotating Forward; D2 is off, M+ output is positive, **M-** output is negative).

T1: Indicates the forward rotation time, the default is adjustable up to 5000 seconds (>1hr) and the time can be set from 1X-8X through the jumper pads (up to 40000 seconds) (> 11hrs) **X Multiplier Applies to Both Forward & Reverse**

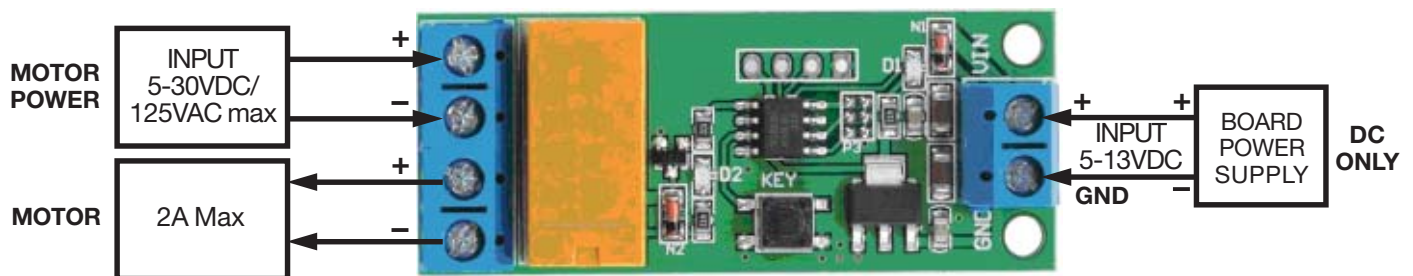
T2: Indicates the reverse rotation time, The default is adjustable up to 5000 seconds (> 1hr) and the time can be set from 1X-8X through the jumper pads (up to 40000 seconds) (> 11hrs) **X Multiplier Applies to Both Forward & Reverse**



NOTE: Turning OFF or Removing Board Power (VIN & GND) Does not Remove Power From Motor!

Motor Power (P+ & P-) Must Also be Removed or Turned OFF!

Motor Will Rotate in "REVERSE" Direction if Board Power OFF/Removed AND Motor Power is On!



NOTE: Motor and Motor Power does not distinguish between Positive (+)/Negative (-) or AC. Terminals are connected to Relay Contacts Only (Forward/Reverse is Relative to your connections & needs). Symbols are for Reference Only.



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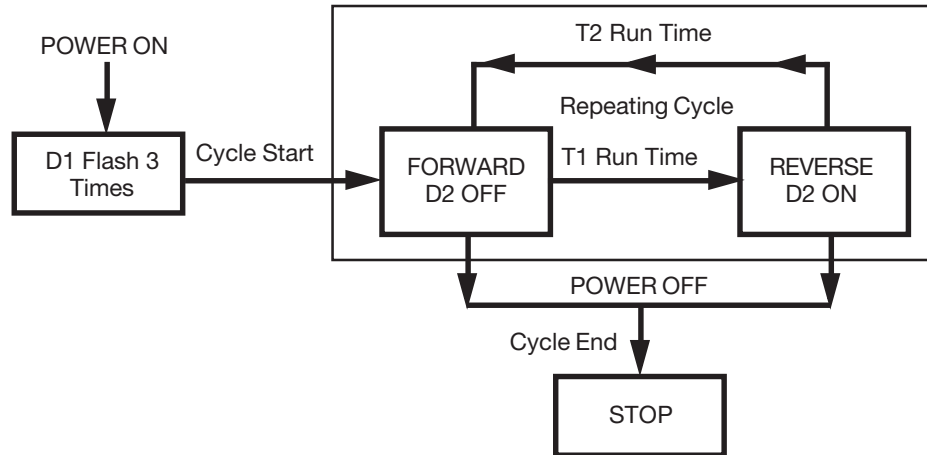
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Auto Reverse/Forward DC Motor Control

Normal Operation

1. After Power up: D1 blinks 3 times, now in the “Working Mode”
Reverse: LED D2 ON Forward: LED D2 OFF
2. Cycle Repeats Until Board Power Is Removed



WATCH VIDEO BEFORE ATTEMPTING

Setup: NOTE: This can be tedious, Be prepared to make several attempts!

Best to set up basic running times before you select the Multiplier; Remembering that X1= “what you set is what you get” — X2 is double — X8 is 8 times!

Any Pause in Setup over ~10 seconds results in reverting to “Working Mode”

1. Setting “Forward” run time.

- a. When D2 is OFF, Press and hold the KEY button for 2 seconds to enter “Forward Setup Mode”, D1 will come ON
- b. Now In “Forward Setup Mode”, Press the KEY button twice, D1 will turn OFF,
- c. Now In “Forward Time Set Mode”, press the KEY button, timing starts, D1 is flashing
Allow D1 to flash for the time you want motor to run
Note: The total time D1 flashes will become the Forward run Time (T1)
Press KEY button again to stop the clock (exit “Time set Mode”).
The D1 flashing time is now been set as the Forward run Time (T1)
- d. IF Finished Cycle the power
- e. To continue to Set “Reverse Time”

2. Setting “Reverse” run time.

- a. When D2 is ON, Press and hold the KEY button for 2 seconds to enter “Reverse Setup Mode”, D1 will come ON
- b. Now In “Reverse Setup Mode”, press the KEY button twice, D1 will turn OFF,
- c. Now in “Reverse Time Set Mode” press the KEY button, timing starts, D1 is flashing
Allow D1 to flash for the time you want motor to run
Note: The total time D1 flashes will become the Reverse run Time (T2)
Press KEY button again to stop the clock (exit “Time set Mode”).
The D1 flashing time is now been set as the Reverse run Time (T2)
- d. Cycle the power to see run times as set (X1)
Forward T1 & Reverse T2 base times are set up.

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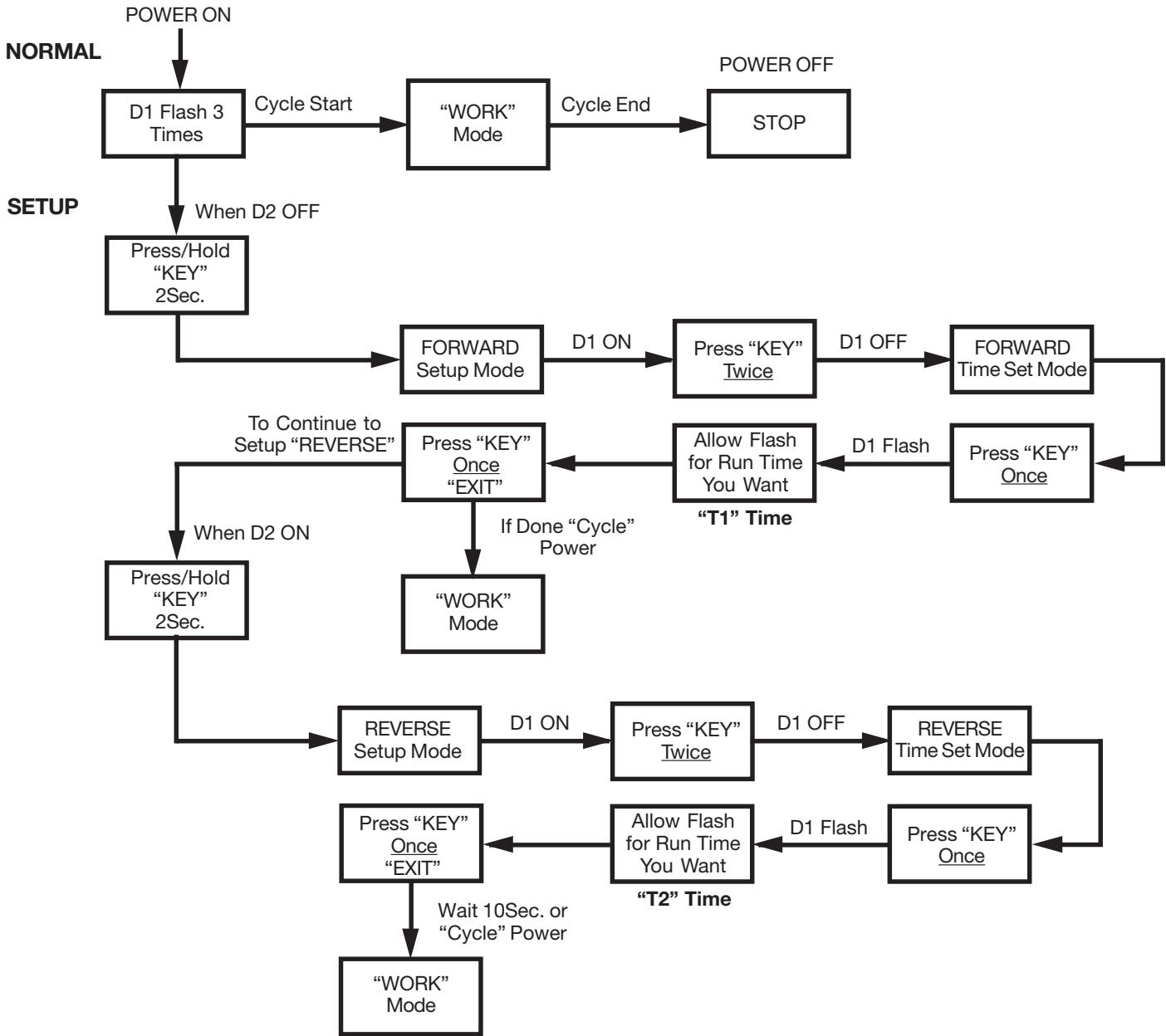
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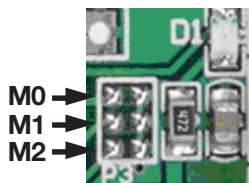
WATCH VIDEO BEFORE ATTEMPTING



3. Set Multiplier

a. Jumper (or solder bridge) Multiplier pads as you need (X1-X8)

NOTE: X Multiplier Applies to Both Forward & Reverse



M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 1	M1 ■■
M2 ■■		M2 ■■
M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 2	M1 ■■
M2 ■■		M2 ■■
M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 3	M1 ■■
M2 ■■		M2 ■■
M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 4	M1 ■■
M2 ■■		M2 ■■
M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 5	M1 ■■
M2 ■■		M2 ■■
M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 6	M1 ■■
M2 ■■		M2 ■■
M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 7	M1 ■■
M2 ■■		M2 ■■
M0 ■■		M0 ■■
M1 ■■	T1&T2 = Set Time x 8	M1 ■■
M2 ■■		M2 ■■

■■ = BRIDGE/JUMPER
 ■■ = OPEN/NO CONNECTION