

BASIC MOTION CONTROL: MOVE BETWEEN TWO EXTREMITIES (SAY LEFT AND RIGHT EXTREMITIES) STOPPING AT EACH EXTREMITY FOR A SPECIFIED TIME E- V1

Limit Switch 1 (LS1) used to detect arrival at the Left Extremity, LS2 used to detect arrival at the Right Extremity. Limit Switches are Normally Open, so are closed by arrival at the extremity.

+12v DC at Timer 1's N/O relay contact drives motion to the Right (towards LS2), while +12v DC at Timer 2's N/O relay contact drives motion to the Left (towards LS1).

Notice that Timer 1's N/O output is used to "latch" its own Trigger so that movement will continue once its Limit Switch 1 has been left behind (and therefore LS1 is OFF) -- but that the connection is via the N/C of the Relay12-2 (which is turned ON by arrival at LS2). This means that when arrival is detected at Limit Switch 2, Relay12-2 is turned ON, this then breaks the circuit to Timer 1's trigger which then turns its relay OFF, stopping all movement. The same control approach is used to control motion in the opposite direction.

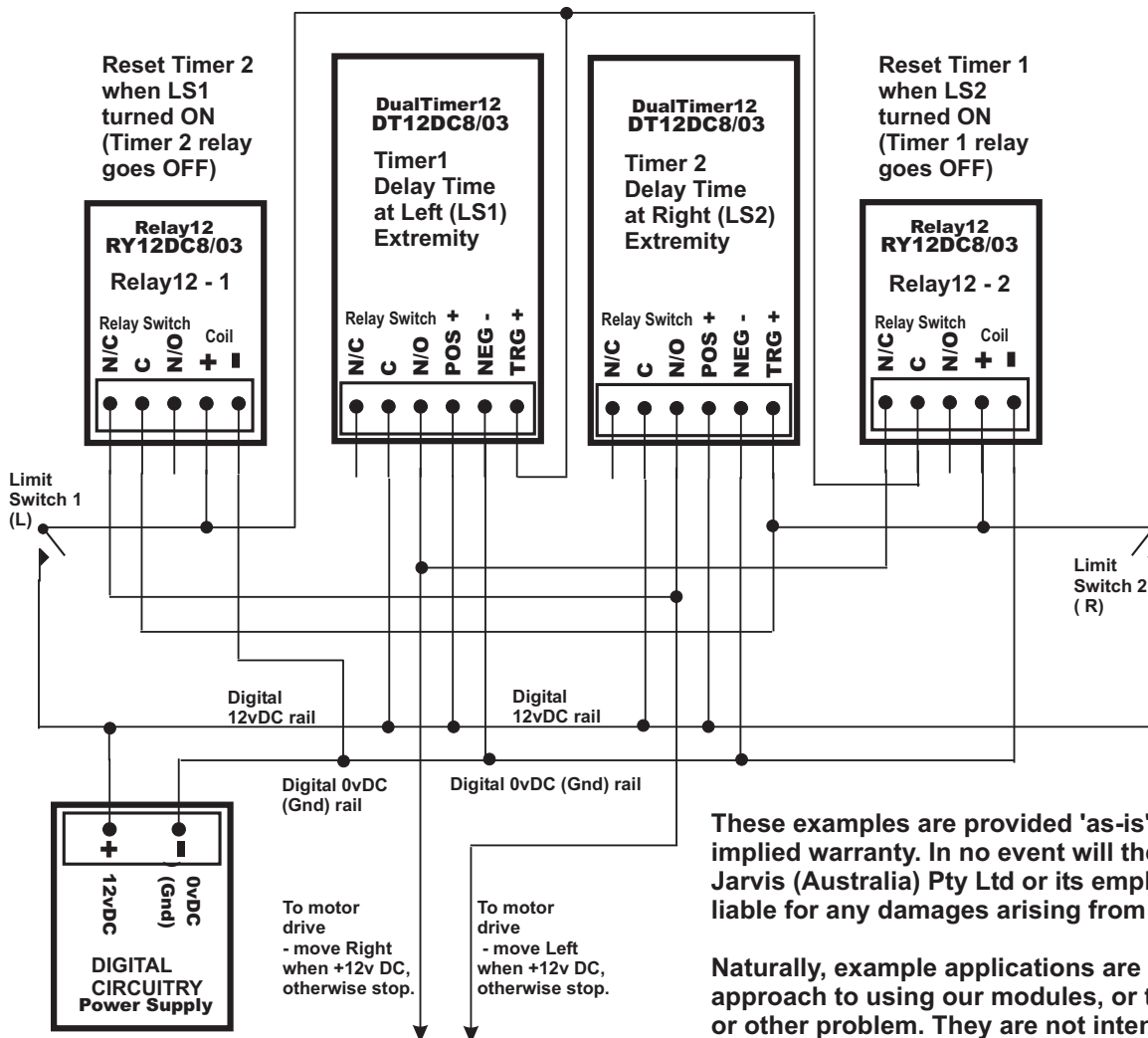
Notes:

1. It is electronically possible (although mechanically should not be possible) for LS1 and LS2 to be ON simultaneously. This may not be acceptable in your use.
2. The circuitry assumes that each Limit Switch stays ON until the associated Timer's delay period has expired and the Timer switches its relay ON.
3. To start, the moved object must be activating either one of the Limit Switches (ie LS1 or LS2 must be ON in order to cause one of the Timers to turn its relay ON).

All Timers using Positive (+ve) Trigger
←-----

Delay Mode
(say) 10 seconds

Delay Mode
(say) 5 seconds



These examples are provided 'as-is', without any expressed or implied warranty. In no event will the authors, ULTRAsmart, Jarvis (Australia) Pty Ltd or its employees or directors be held liable for any damages arising from the use of these examples.

Naturally, example applications are only intended as a general approach to using our modules, or to solving a control problem or other problem. They are not intended as technical advice. Your specific application may be different. It is the users responsibility to use our modules safely, correctly, and appropriately.

Copyright © Jarvis (Australia) Pty Ltd trading as ULTRAsmart.
November 2008