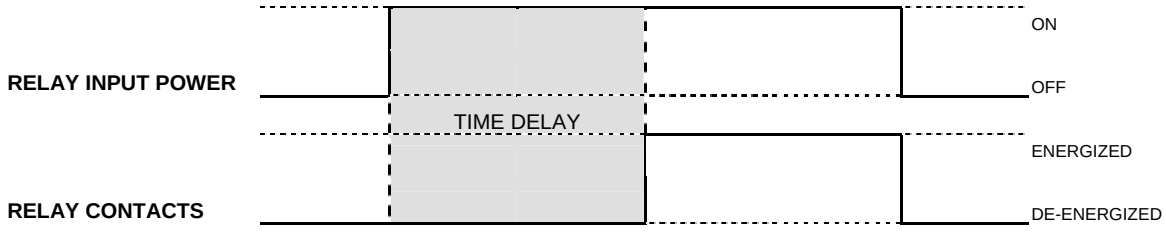
DARE® Electronics, Inc.
3245 S. County Rd. 25A, Troy, Ohio 45373
Phone (937) 335-0031 Fax (937) 339-6948

TIME DELAY RELAY OPERATION

DARE time delay relays can perform various functions based on the specified requirements for a particular application. The various available time delay functions are:

DELAY ON OPERATE

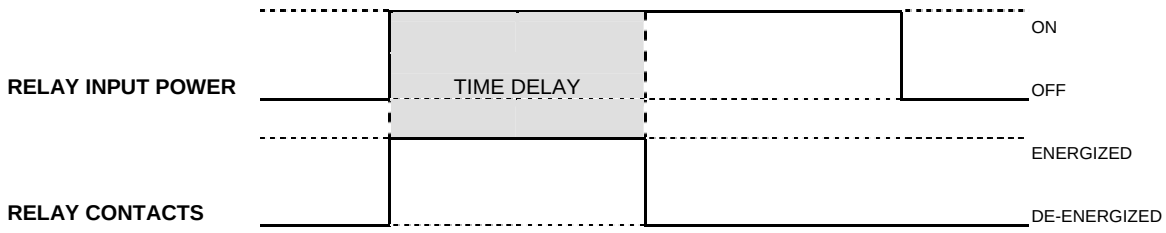
The time delay period begins when power is applied to the input terminals of the relay. When the time delay has completed, the contacts of the relay will switch to the energized position. The relay contacts will remain in the energized position until power is removed. The contacts of the relay transfer to the unenergized position upon removal of power. The time delay of the relay will reset if power is removed before the delay has completed.



TIMING DIAGRAM FOR DELAY ON OPERATE

INTERVAL TIME DELAY

When power is applied to the input terminals of the relay, the contacts of the relay switch to the energized position and the timing period begins. When the time delay interval has completed, the relay contacts will transfer to the unenergized position. Once the interval time delay has completed, power must be removed in order to reset the time delay of the relay. If power is removed before the time delay has completed, the contacts will de-energize and the time delay will terminate.



TIMING DIAGRAM FOR INTERVAL TIME DELAY

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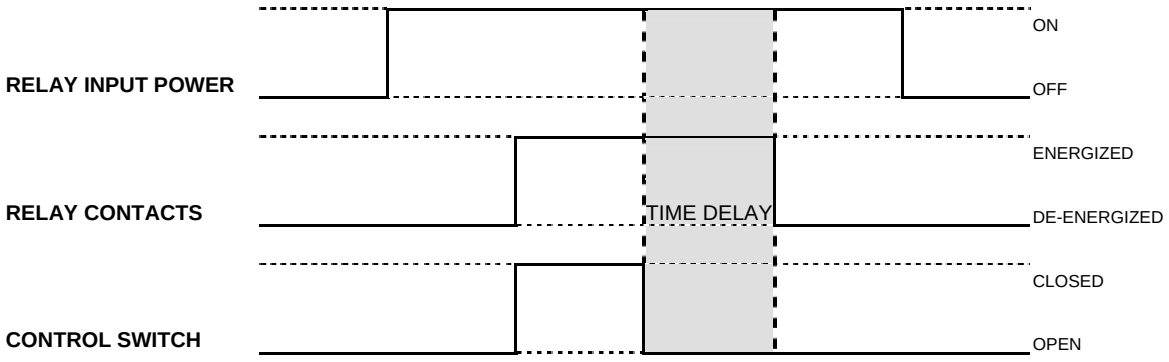
DELAY ON RELEASE - Controlled

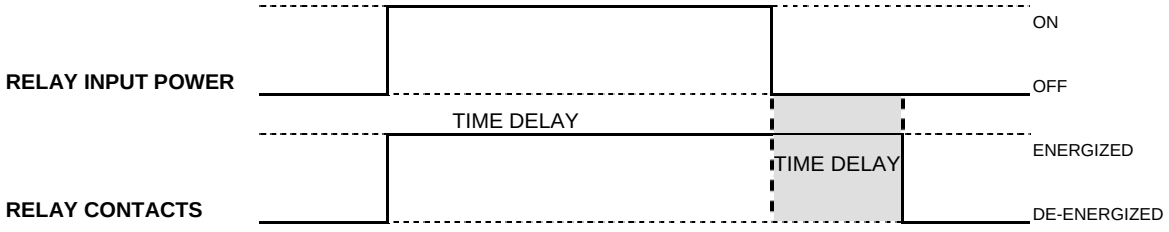
Power must be continuously applied to the input terminals of the relay during operation of the relay. The contacts of the relay will transfer to the energized position when an external control switch is closed. The time delay interval is initiated when the external control switch is opened. Once the time delay interval has completed, the contacts of the relay will switch to the unenergized position. If the control switch is re-closed before the time delay period has completed, the contacts of the time delay relay will remain in the energized position and the time delay period will reset. The time delay will restart the next time the control switch is opened.



TIMING DIAGRAM FOR CONTROLLED RELEASE DELAY

DELAY ON RELEASE – True

The contacts of the relay will transfer to the energized position when power is applied to the input of the relay. The time delay period is initiated when power is removed from the relay. The contacts of the relay remain in the energized position and will switch to the unenergized position when the time delay has completed. If power is reapplied to the relay before the time delay has completed, the contacts of the relay will remain energized and the time delay will reset. The time delay will restart the next time that power is removed from the relay.



TIMING DIAGRAM FOR TRUE RELEASE DELAY

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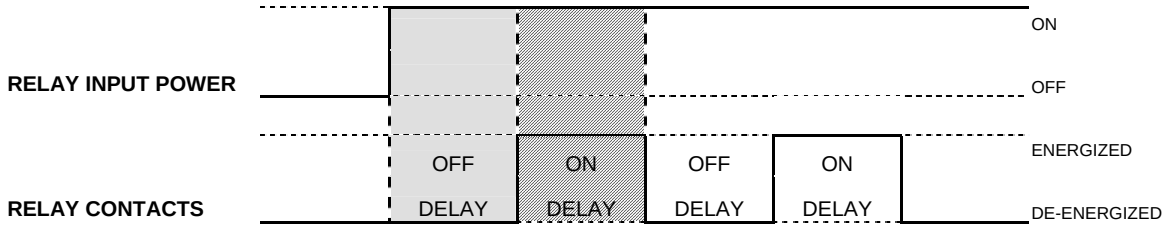
REPEAT CYCLE

When power is applied to the relay input terminals, the off cycle time delay begins. After the off cycle time delay has completed, the relay contacts transfer to the energized position and the on cycle time delay period begins. When the on delay time period completes, the contacts transfer back to the unenergized position. This cycle repeats until power is removed from the relay input terminals. The duty cycle of the off/on time delays can be customized to any desired specification.



TIMING DIAGRAM FOR REPEAT CYCLE TIMER

FIELD ADJUSTABLE MODELS

Time delay relay models are available with a timing range that can be adjusted with an external resistor. The time delay is at the minimum of the range when the external timing resistor terminals of the relay are shorted together. The time delay of the relay increases linearly as the resistance between the timing resistor terminals is increased. Timing ranges and resistances can be custom designed to meet any specification requirement.