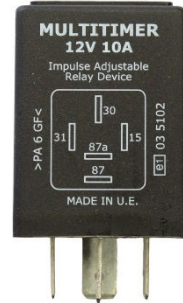


User Guide For Adjustable Delay Timer Relay 12V & 24V, 10A

Scope of user guide

This user guide relates to the 12V and 24V versions of the adjustable delay timer relay supplied by 12 Volt Planet. Product codes are P00965 (12V) and P01261 (24V).



Overview of relay modes of operation

These relays can be configured to operate in either a 'Delay before ON' or a 'Delay before OFF' mode.

▪ Delay before ON mode

When a voltage is applied to terminal 15 (the timer trigger) the relay will wait for a user-settable period of time before switching power to the output (terminal 87). The relay remains in this state until the power is removed from terminal 30, at which point it resets and will activate again when a voltage is removed and again applied to terminal 15.

▪ Delay before OFF mode

When a voltage is applied to terminal 15 (the timer trigger) the relay will switch power to the output (terminal 87). As soon as the voltage is removed from terminal 15 the timer will start and power will continue to be fed to terminal 87 for a user-settable period of time before the relay switches off. The relay will remain in this state until a voltage is once again applied to and removed from terminal 15.

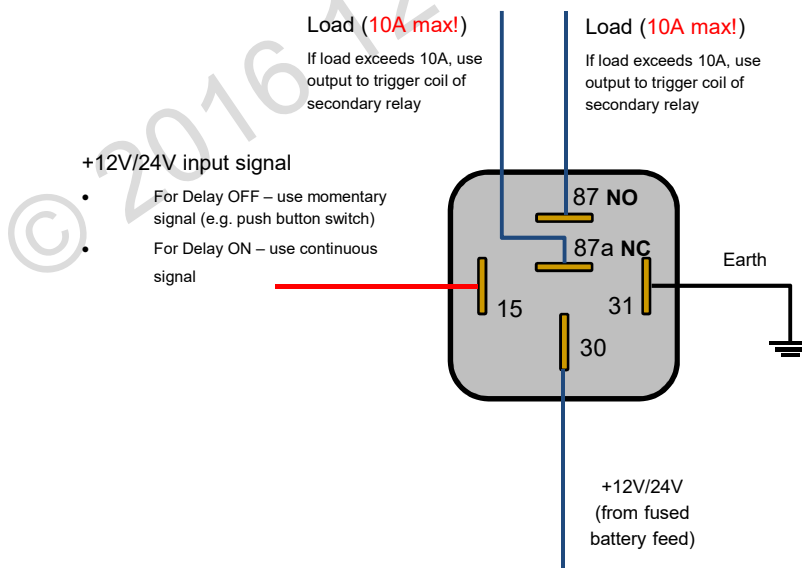
Relay pin configuration and wiring

The wiring diagram below shows how the relay should be connected.

Terminals 15 and 31 are for the timer circuit, terminals 30, 87 & 87a are for the main power circuit

- Terminal 30 requires a permanent +12V/24V supply (we recommend that this is fused for safety)
- Terminal 31 requires a -ve (earth/ground) connection
- Terminal 15 is the timer trigger and requires either a momentary or permanent +12V/24V supply depending on the selected mode
- Terminal 87 is the Normally Open (NO) contact – it is connected to terminal 30 when the relay is active (and vice versa)
- Terminal 87a is the Normally Closed (NC) contact – it is connected to terminal 30 when the relay is inactive (and vice versa)

This timer relay is effectively a changeover relay, so power from 30 is routed to either 87 (NO) or 87a (NC) depending on whether the relay is active or inactive.



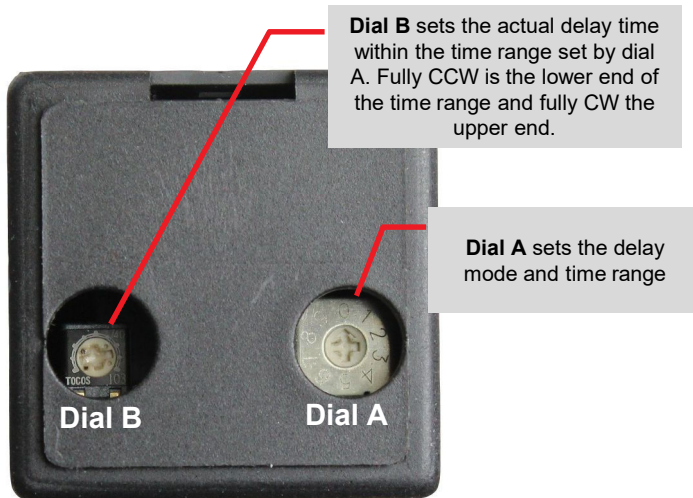
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Timer settings

Carefully prise off the white blanking caps on top of the relay to access the timer adjustment dials. Dial A selects the mode (Delay ON or OFF) and the time range within that mode (this is explained more easily by looking at the table below right).

Dial B sets the actual delay time within the time range set by Dial A. When Dial B is fully counter-clockwise the lowest time in the range will be selected, and when fully clockwise the highest range in the time range will be selected, and it is infinitely variable in between.

Note: Use a cross-head watchmaker's screwdriver for adjustments. Dial A will rotate continuously but Dial B has stops at either end of its travel so do not force it or it may be damaged. Dial A has a small arrow moulded into one end of the cross which should point to the setting number you require (0 – 9). You will probably need to set Dial B approximately, test the relay and then make further adjustments to Dial B until you reach the desired delay time.



Dial A setting	Time range	Delay Mode
0	0.5 – 10 secs	Delay before OFF
1	5 – 60 secs	
2	0.5 – 10 mins	
3	5 – 60 mins	
4	0.5 – 6 hrs	Delay before ON
5	0.5 – 6 hrs	
6	5 – 60 mins	
7	0.5 – 10 mins	
8	5 – 60 secs	
9	0.5 – 10 secs	

FAQs (Frequently Asked Questions)

- Q** Do I have to use a push button or momentary switch to trigger the timer in Delay OFF mode?
A Not necessarily. Any +12V/24V signal applied and then removed (regardless of the time between them) will work.
- Q** Can I use this timer to switch the –ve side of a circuit?
A No, this timer will only work if switching the +ve side of a circuit and may be damaged if wired incorrectly.
- Q** What is the maximum current carrying capacity of this relay?
A 10A. For higher loads use a higher capacity relay and use the output of the timer relay to power the coil of the secondary relay. Connecting directly to loads greater than 10A may damage the relay.
- Q** If I re-apply power to terminal 15 in Delay OFF mode whilst the timer is running what will happen?
A The timer will reset and re-start from zero when power is once again removed from terminal 15.
- Q** What will happen if I remove power from terminal 30 whilst the timer is operating?
A Terminal 30 supplies power to the timer and without it the timer function will not work, so this should be powered whenever the timer is running.
- Q** In Delay OFF mode does the relay operate as soon as I apply power to terminal 15?
A Yes, as soon as power is applied the relay will changeover and terminal 87 will become connected to terminal 30. This relay will remain in this state until power is removed from terminal 15 and the timer will then start.
- Q** In Delay ON mode how do I turn the relay off?
A The power must be removed from terminal 30. The most common way to configure the relay in this mode is to have the power to terminal 30 and the trigger to terminal 15 on the same spliced feed. As soon as this power is switched on the timer will start and when it is switched off it will also cut power to 30, resetting the timer and turning the load off at the same time.