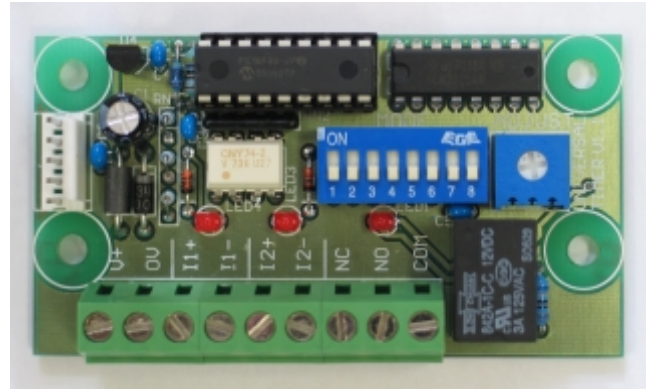


The UT-1 is a multi-purpose timer board especially designed for building management systems.

The UT-1 provides unique features, which are normally not available in other timer boards. The board has been optimised to provide an easy to install and easy to set up solution for many applications. A selection of 8 timing functions is available and should fulfill most requirements.

The features include

- ⇒ Dual supply voltage 12Vdc and 24Vdc with auto-detect.
- ⇒ Isolated trigger and reset inputs. The inputs can be connected to clean contact type signals, to voltages referenced either to 0V or V+ or they can be connected to completely unrelated voltage systems.
- ⇒ Input voltage range: 8Vdc - 30Vdc
- ⇒ DPST relay output with COM, NO and NC contacts.
- ⇒ Contact rating: 3A resistive - 48Vdc/ac
- ⇒ LED indications for the relay output and both inputs.
- ⇒ 8 operating modes can be selected via the dip switches.
- ⇒ 4 timing ranges can be selected via the dip switches.
- ⇒ Continuous time adjustment within the selected range.
- ⇒ The logical signal for the relay output and each of the 2 inputs can be inverted via the dip switches. This provides for easy connectivity. This feature can also be used to achieve the correct output behaviour during a power failure or to minimise power consumption by reducing the on-time of the relay.
- ⇒ Long term accuracy of the delay time.
- ⇒ Dimensions: 77mm x 42mm (the photo is to scale when printed on A4 paper)
- ⇒ Maximum power supply current: 60mA (the relay and both LEDs energized with a 30Vdc supply voltage)
- ⇒ Quality rising clamp PCB terminals (maximum cable size 2.5mm²)



Installation and Set-Up

The UT-1 provides isolated trigger and reset inputs. The trigger input is on the I1+ and I1- terminals, the reset input is on the I2+ and I2- terminals. A dc voltage between 8V and 30V turns the input on. The I1+ terminal has to be positive to the I1- terminal and the I2+ terminal has to be positive to the I2- terminal. The drawings on the next page show examples of the typical connection methods.

The power supply is connected to the V+ and 0V terminals. The supply voltage can be between 10Vdc and 30Vdc. V+ is positive.

The timer is set up via the 8 dip switches as shown in the table on the right.

Dip switches 1 to 3 select one of the 8 operating modes of the timer. The operating modes are explained on the last page.

Dip switches 4 and 5 select one of the 4 timer ranges. With the trimpot the time delay can be adjusted within the selected time range.

The signal of both inputs can be inverted via dip switches 6 and 7.

The operation of the relay output can be inverted via dip switch 8.

Dip Switch Settings			
Dip1-Dip3	Timer Mode (Please see last page for more information)	Dip1=Off, Dip2=Off, Dip3=Off	On-Delay with Hold
		Dip1=Off, Dip2=Off, Dip3=On	On-Delay with Latch
		Dip1=Off, Dip2=On, Dip3=Off	Off-Delay with fixed Extension Time
		Dip1=Off, Dip2=On, Dip3=On	Off-Delay with Retrigger
		Dip1=On, Dip2=Off, Dip3=Off	Pulse Shaper
		Dip1=On, Dip2=Off, Dip3=On	Entry/Exit Delay
		Dip1=On, Dip2=On, Dip3=Off	Flasher with On-Delay
		Dip1=On, Dip2=On, Dip3=On	Flasher with Off-Delay
Dip4-Dip5	Timer Range	Dip4=Off, Dip5=Off	0.5-10 seconds
		Dip4=Off, Dip5=On	2-50 seconds
		Dip4=On, Dip5=Off	10-200 seconds
		Dip4=On, Dip5=On	50-1000seconds
Dip6	Polarity of Trigger Input	Dip6=Off Dip6=On	Input normal: Off=In-active, On=Active Input Inverted: Off=Active, On=In-Active
Dip7	Polarity of Reset Input	Dip7=Off Dip7=On	Input normal: Off=In-active, On=Active Input Inverted: Off=Active, On=In-Active
Dip8	Polarity of Relay Output	Dip8=Off Dip8=On	Output normal: Off=In-active, On=Active Output Inverted: Off=Active, On=In-Active

Please Note: New settings for dip switches 1 to 3 are only accepted at the time of the power up. All other dip switches are checked during the operation.

Uni-Timer Installation Examples

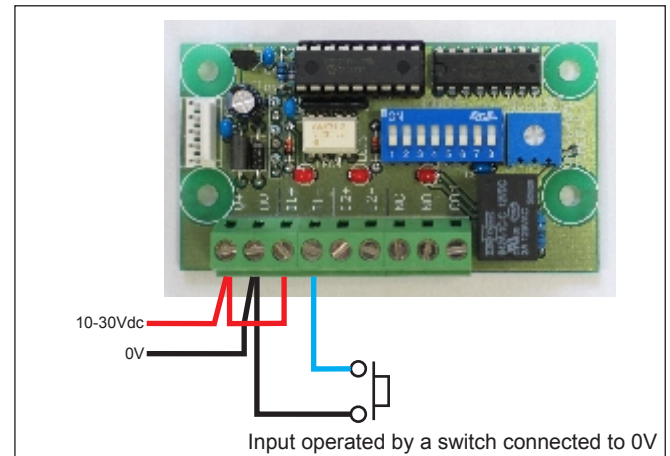
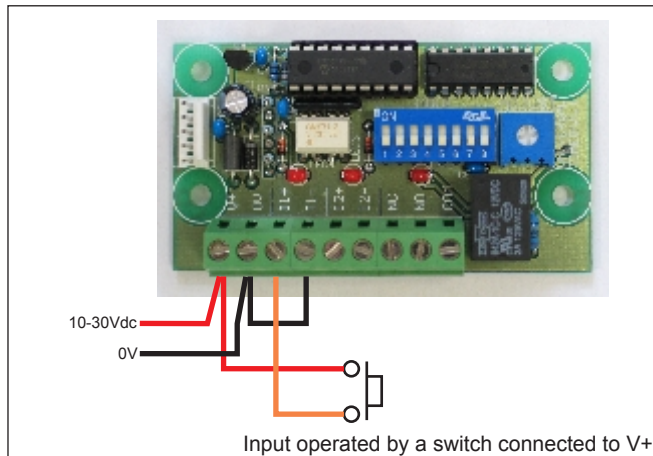
The trigger and reset inputs can be operated by a variety of signal types. The examples below use the trigger input to illustrate the different methods. The methods shown for the trigger input can also be used for the reset input.

The trigger input and the reset input are fully isolated from the power supply and from each other. A voltage between 8Vdc and 30Vdc can be used to operate the inputs. The signal types can be different for the trigger input and the reset input.

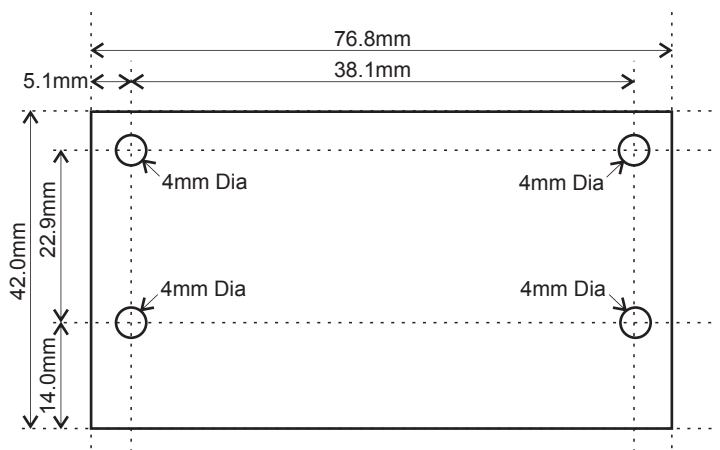
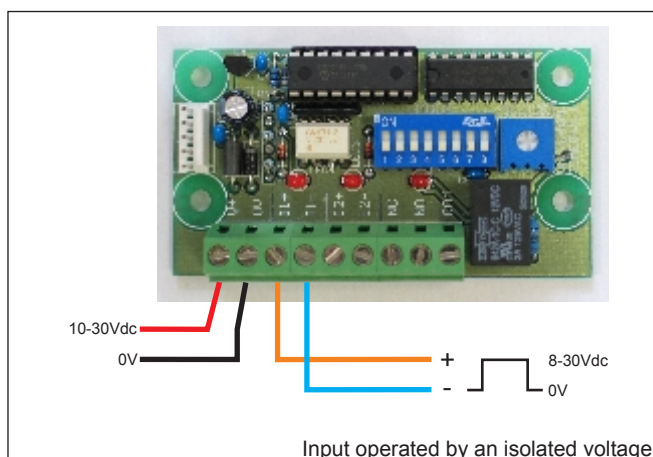
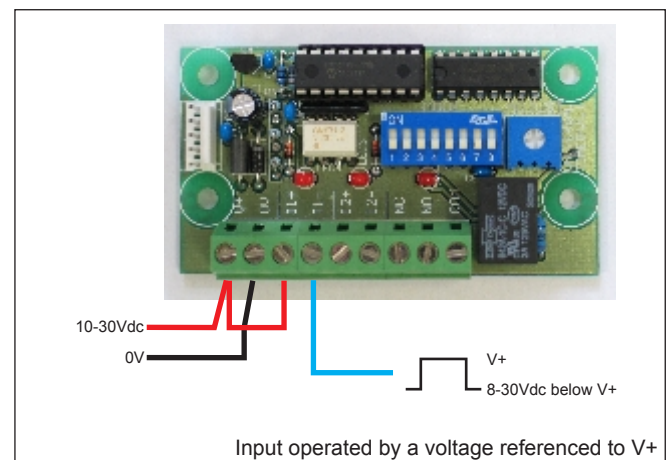
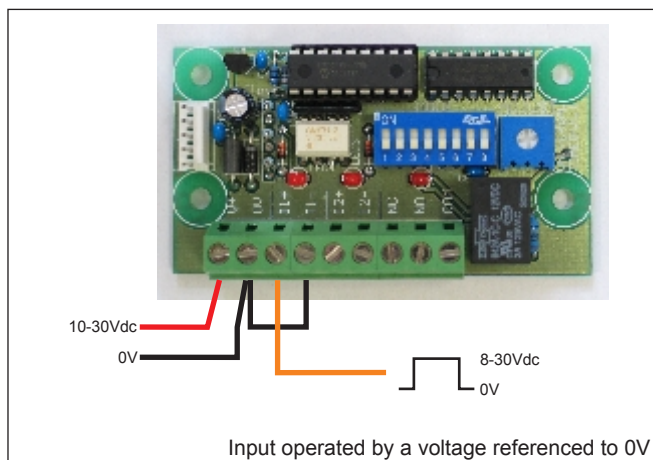
The inputs can be connected to other signals within the system. For example the input could be connected to an electric lock, a light etc. Please contact us on our help line, if you require further information.

The input signals can be inverted via dip switches 6 and 7. Please see the table on the previous page for further details. This makes the board quite versatile and allows to interface with a variety of contact or voltage systems.

Contact type signals



Voltage type signals



UT-1 Operating Modes

