



**Models Available**

- TM977E** Delay on Energise Timer
- TM977A** Delay on De-energise Timer
- TM977N** Interval Timer
- TM977C** Cyclic Symmetrical Timer
- TM977B** Flasher Timer
- TM977M** Multifunction Timer

**Product Features**

- Slimline - only 22.5mm wide
- Single function or multifunction
- Time ranges from 1 second to 10 hours
- Supply voltages from 12Vdc to 415Vac
- DIN rail mounting enclosure
- Fingerproof screw type terminals

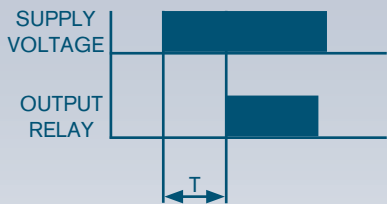
## TM977 Timers

Electronic timers are used to control operation of equipment, machinery, systems or processes in a wide range of industrial applications. The timers offer many different timing functions together with accurate, long term switching reliability and high current (8 Amp) switching contacts.

The TM977 timers are housed in a compact DIN rail mounting enclosure and are auxiliary powered from a large choice of AC or DC auxiliary power options. Time ranges from 1 second to 10 hours are available, adjustable through the calibrated front control knob.

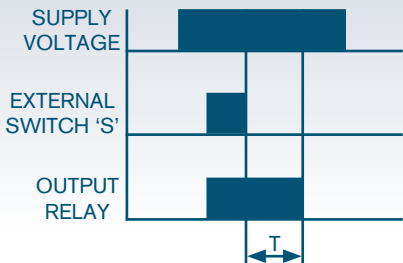
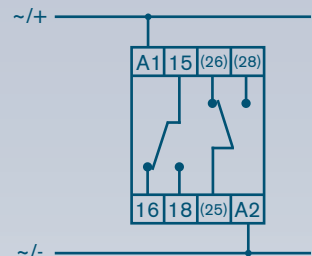
The single or double pole changeover relay output contacts are isolated from the supply voltage and all timers have two LED's to indicate both power and relay status.

### For timing control of machinery, systems and operational processes



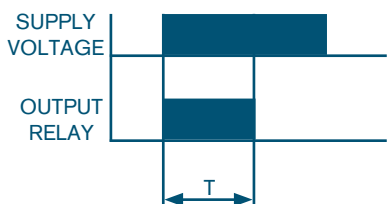
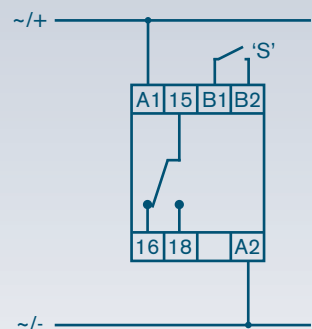
**TM977E (Delay on Energise)**

The time period starts when the supply voltage is applied. At the end of the time period, the changeover relay energises and remains energised until the supply voltage is removed.



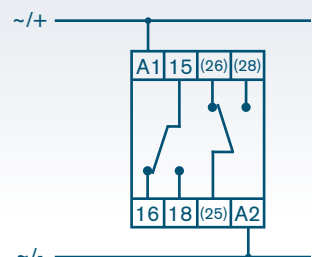
**TM977A (Delay on De-energise)**

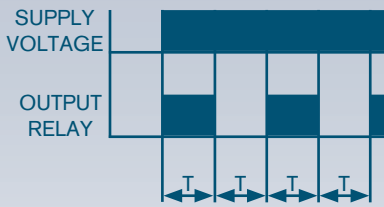
With the supply voltage applied, closing the external switch 'S' energises the changeover relay. When the switch opens, the time period starts and the relay de-energises at the end of the time period. Closing switch 'S' at any point resets the timer.



**TM977N (Interval)**

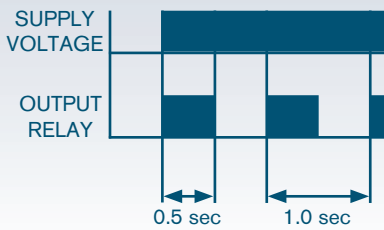
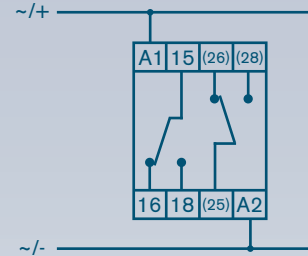
The changeover relay energises when the supply voltage is applied. At the end of the time period the relay de-energises.





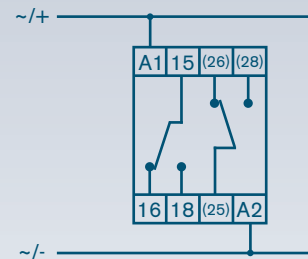
**TM977C (Cyclic Symmetrical)**

With the supply voltage applied the changeover relay energises for the time period then de-energises for the same time period, repeating indefinitely until the supply voltage is removed.



**TM977B (Flasher)**

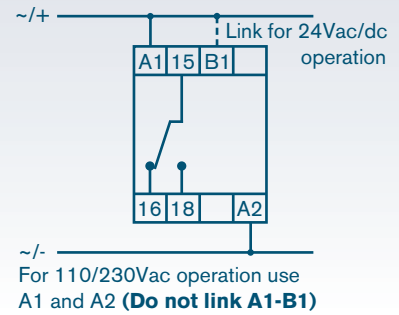
With the supply voltage applied the changeover relay will cycle indefinitely 60 times per minute. The flasher timer is ideal for alarm circuits and other control functions.



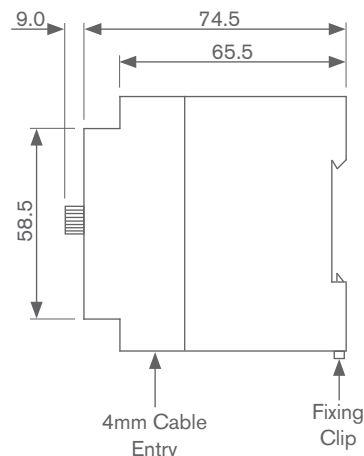
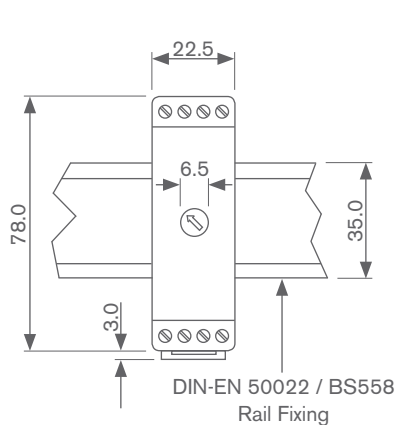
Delay on Energise	Interval	Cyclic 'On' First	Cyclic 'Off' First
0.06-0.6 seconds	0.25-2.5 seconds	2-20 seconds	16-160 seconds
15-150 seconds	1-10 minutes	8-80 minutes	64-640 minutes

**TM977M (Multifunction)**

Selectable through four DIP switches on the front of the timer are the energise, interval, 'cyclic on' and 'cyclic off' functions and four **Low** (TM977ML) or four **High** (TM977MH) time ranges. The timer can operate from 24Vac/dc or 110/230Vac.



**Dimensions**



All dimensions in mm

**Specification****Repeat Accuracy:**

- $\pm 0.5\%$  at constant ambient
- $\pm 3\%$  to temperature spec. VDE 0435
- Setting accuracy  $\pm 15\%$

**Power Supply Voltages:**

- 24Vac/dc, 110Vac, 230Vac ( $\pm 15\%$ )
- 12Vdc, 415Vac ( $\pm 15\%$ )

**Burden:**

- < 2VA

**Frequency:**

- 50/60Hz

**Relay Output:**

- 1 or 2 pole changeover contact(s)

**Contact Rating:**

- 8A at 250Vac/30Vdc

**Contact Life:**

- 1,000,000 operations at 5A
- 10,000,000 operations at 1A

**Reset Time:**

- 100ms approximately

**Operating Temperature:**

- $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$

**Enclosure:**

- 22.5mm wide grey ABS
- Mount: 35mm DIN rail (DIN-EN 50022)

**Enclosure Code:**

- Case IP50, terminals IP10

**Vibration Resistance:**

- To VDE 0160

**Weight:**

- 100g

**Markings:**

- CE marked

Specification subject to change without notice.

**Ordering information**

Model	Code	Description
	TM977E	Delay on Energise Timer
	TM977A	Delay on De-energise Timer
	TM977N	Interval Timer
	TM977C	Cyclic Symmetrical Timer
	TM977B	Flasher Timer
	TM977M	Multifunction Timer

Time Range	Code	Description
	0.03-1 sec	0.03 to 1 second
	0.1-3 sec	0.1 to 3 seconds
	0.3-10 sec	0.3 to 10 seconds
	1-30 sec	1 to 30 seconds
	2-60 sec	2 to 60 seconds
	3-100 sec	3 to 100 seconds
	10-300 sec	10 to 300 seconds
	0.3-10 min	0.3 to 10 minutes
	1-30 min	1 to 30 minutes
	2-60 min	2 to 60 minutes
	0.1-3 hours	0.1 to 3 hours
	0.3-10 hours	0.3 to 10 hours
	L	TM977ML only (see description)
	H	TM977MH only (see description)

Auxiliary Power	Code	Description
	12V	12Vdc
	24V	24Vac/dc
	110V	110Vac
	230V	230Vac
	415V	415Vac
	Other	Specify (subject to technical viability)

Output / Options	Code	Description
	1C/O	1 Pole Changeover Relay Output
	2C/O	2 Pole Changeover Relay Output
	Preset	Factory Preset Fixed Time Range (specify)

**Example** **TM977E - 1-30 sec - 110V - 2C/O**

**Options****Timer Relay Output**

All timers are supplied with a single pole changeover relay output however a two pole changeover relay output is available as an option (not available on the TM977A, TM977ML or TM977MH). The TM977A timer is available with a two pole normally open relay output.

**Fixed Time Range**

Timers can be supplied with a factory preset time range fixed during manufacture and a blanking plug fitted replacing the front control knob.