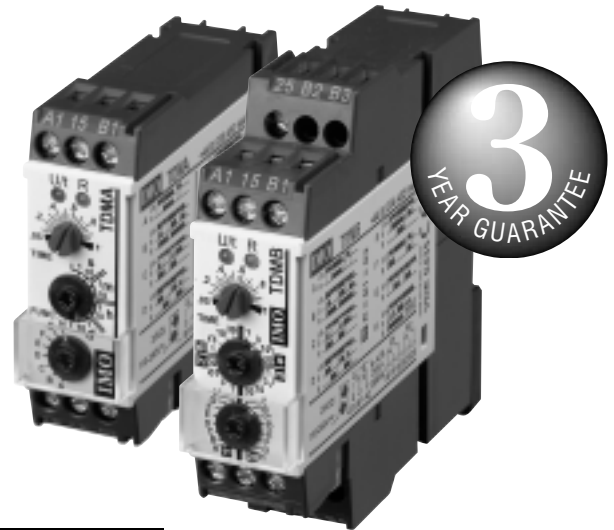


# DIN Timers TD



22.5mm DIN rail mounting Electronic Timers

- AC/DC coil operation
- Multi-time range
- Multi-function, On-delay, Off-delay and Star/Delta versions
- Voltage range selectable
- Marking plate cover



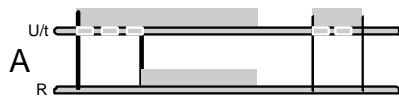
## Options and ordering codes

TD		MA		Multi Voltage Options	
DIN rail mount timers	<b>TD</b>				
Multi-function	<b>MA</b>				
4 function	<b>MC</b>				
Multi-function 2 C/O	<b>MB</b>				
On-delay	<b>EA</b>				
Off-delay	<b>RA</b>				
Asymmetrical recycling	<b>IA</b>				
True off-delay 3 minutes	<b>AA</b>				
True off-delay 10 minutes	<b>AB</b>				
Star/Delta	<b>SD</b>				
On delay single function	<b>SF</b>				
		All timers are Multi-voltage I/P 24VAC/DC and 100-230VAC selectable on unit. Except EA+RA models		<b>Multi Voltage Options</b>	
		EA + RA models only		<b>110VAC + 24VAC/DC</b>	
		EA + RA models only		<b>230VAC + 24VAC/DC</b>	
		SF model only		<b>24VAC/DC</b>	
		SF model only		<b>110VAC</b>	
		SF model only		<b>230VAC</b>	

## Specification

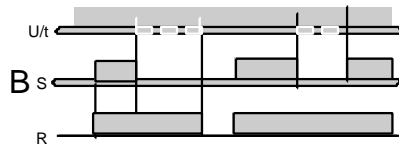
	<b>TDMA</b>	<b>TDMC</b>	<b>TDMB</b>	<b>TDEA</b>	<b>TDRA</b>	<b>TDIA</b>	<b>TDA A</b>	<b>TDAB</b>	<b>TDS D</b>	<b>TDSF</b>
Operation modes	A,B,C,D E,F,G,H	A,B,F,G	A,B,C,D E,F,G,H	A	B	Rp,Ri	T	T	S	A
Time range	0.05sec - 10 days	0.05sec - 10 days	0.05sec - 10 days	0.05sec - 10 days	0.05sec - 10 days	0.05sec - 10 days	0.1sec - 3 min	0.1sec - 10 min	0.5sec-3minY 40-100ms Y	1-10 min
Accuracy	±0.5% FS									
Supply voltage	24VDC ±10%, 24VAC-15% +10%, 110-230VAC-15% +10%									
Nominal power consumption	24V 1.5VA/ 1W-110V 2VA 230V 8VA	24V 1.5VA/ 1W-110V 2VA 230V 8VA	24V 1.5VA/ 1W-110V 2VA 230V 11VA	24V 1.5VA/ 1W-110V 2VA 230V 8VA	24V 1.5VA/ 1W-110V 2VA 230V 11VA	24V 1.5VA/ 1W-110V 2VA 230V 8VA	24V 1.5VA/ 1W-110V 4VA 230V 15VA	24V 1.5VA/ 1W-110V 4VA 230V 15VA	24V 1.5VA/ 1W-110V 2VA 230V 11VA	24V 1.5VA/ 1W-110V 2VA 230V 11VA
Input signal Control contact must be 90% of A1-A2	Power on control contact	Power on control contact	Power on control contact	Power on	Power on control contact	Power on	Power on	Power on	Power on	Power on
Contact configuration	1 C/O	1 C/O	2 C/O programmable	1 C/O	1 C/O	1 C/O	1 C/O	1 C/O	1 C/O with rest position	1 C/O
Control output	8A@250VAC	8A@250VAC	8A@250VAC	5A@250VAC	5A@250VAC	5A@250VAC	5A@250VAC	5A@250VAC	8A@250VAC	5A@250VAC
Life expectancy Electrical Mechanical	400,000 30 x 10 <sup>6</sup>	400,000 30 x 10 <sup>6</sup>	400,000 30 x 10 <sup>6</sup>	100,000 10 x 10 <sup>6</sup>	100,000 10 x 10 <sup>6</sup>	400,000 30 x 10 <sup>6</sup>	100,000 30 x 10 <sup>6</sup>	100,000 30 x 10 <sup>6</sup>	400,000 30 x 10 <sup>6</sup>	100,000 10 x 10 <sup>6</sup>
Allowable ambient temperature	-25 °C upto +55 °C									
IP rating Enclosures Terminals	IP40 IP20									
Terminals	Box clamp screw terminal upto 4mm <sup>2</sup>									

## Mode functions



### A On Delay

On application of supply voltage the time period starts to run. On completion of time the relay energises. Power off reset.



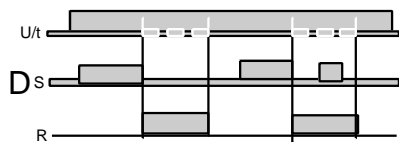
### B Off delay

Supply to the unit must be continuous. On closure of the control contact (S) the relay energises immediately. On re-opening of S the time period starts to run and (R) de-energises. If the control contact (S) is reclosed before "the actual time period is completed, this period will be deleted" and a new one starts on re-opening of (S).



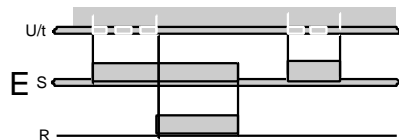
### C Single shot leading edge pulse started

Supply to the unit must be continuous. On closure of the control contact (S) the relay energises immediately and the time starts to run. On completion of the time the relay will de-energise. Activation of (S) during the time out period has no effect.



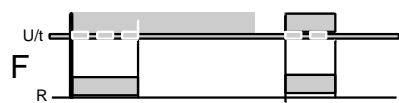
### D Single shot trailing edge

Supply to the unit must be continuous. The first closure of (S) has no effect. On opening of (S) the time period starts to run and (R) energises immediately. On completion of time the relay de-energises. Activation of the control contact (S) during the time out period has no effect.



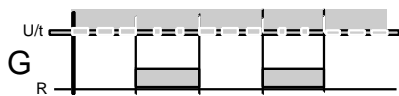
### E On delay with control contact

Supply to the unit must be continuous. On closure of (S) the time period starts to run. On completion of time the relay energises and stays energised as long as (S) is closed. Opening the control contact before the time out is complete will reset the time period.



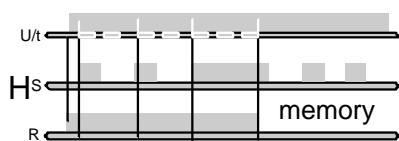
### F Single shot leading edge

On application of supply voltage the time starts and (R) energises immediately. Following time out the relay will de-energise. For a new start of function the supply voltage must be interrupted.



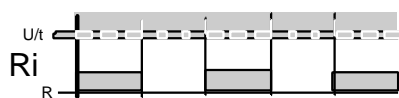
### G Flasher pause first

On application of supply voltage the time period starts to "run. The relay switches on and off for the periods, beginning" with a pause. The time period for pause and pulse is equal.



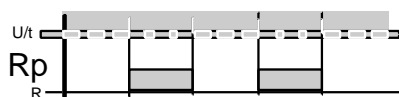
### H Pulse detection

On application of supply voltage the relay energises. The first pulse of (S) starts the time period. Receiving pulses during the time period extends it and (R) stays energised. Receiving no pulses during the time period completes it and (R) de-energises. (R) stays latched until supply voltage has been interrupted.



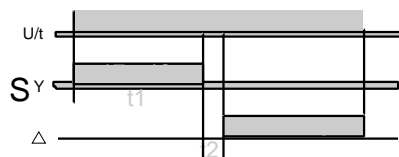
### Ri Cyclic timer pulse started

On application of supply voltage the time period starts to run. "The relay switches on and off for the periods, beginning with a" pulse. The time period for t1 and t2 can be different. The function continues as long as voltage is applied.



### Rp Cyclic timer pause started

On application of supply voltage the time period starts to run. "The relay switches on and off for the periods, beginning with a" pause. The time period for t1 and t2 can be different. The function continues as long as voltage is applied.



### S Star Delta

On application of supply voltage the contact 17 - 18 of the star relay is closed and the star time t1 begins to run. On completion of the t1 the star relay de-energises and the dwell time t2 starts. On completion of t2 the contact 17 - 28 of the delta relay is closed and remains in operation as long as the supply voltage is applied.



### T True Off Delay

When supply voltage U is engaged the relay energises (contacts 15-18). When the supply voltage is removed the set time t begins to run. On completion of time t the output falls back to the off position (contacts 15-16). If the supply voltage U is re-engaged to "the unit before t has elapsed, the time already elapsed is cancelled" and starts again next time the supply voltage is interrupted.

## Function switches

### TDMB

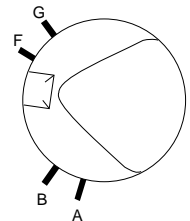
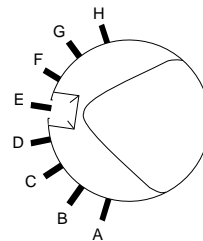
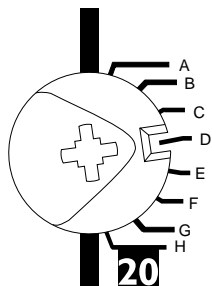
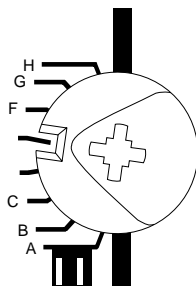
Positions of function switch with one contact as instantaneous c.t.

Both contacts delayed

### TDMA

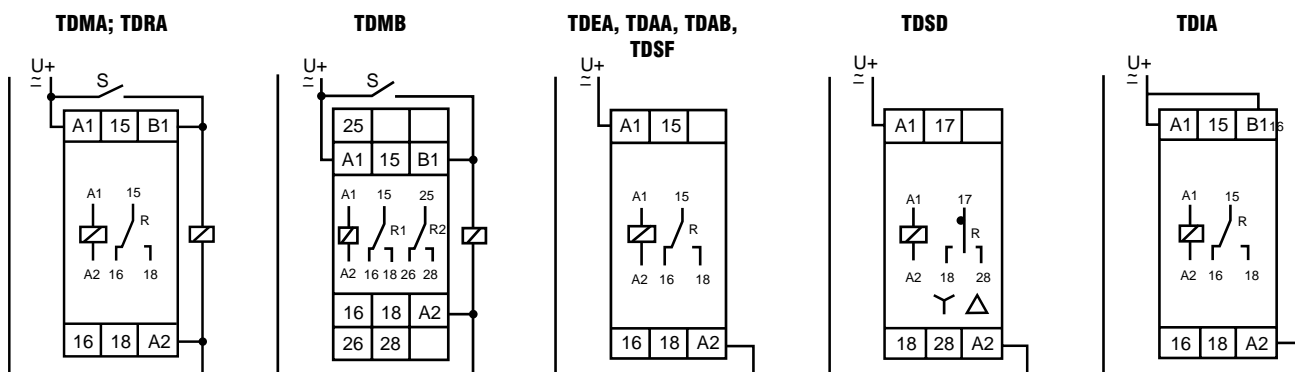
### TDMC

- H pulse detection
- G flashing pause first
- F single shot
- E ON-delay controlled by trigger input
- D single shot trailing edge
- C single shot pulse operated
- B Off-delay
- A On-delay



Start function B, C, D, E and H by control contact A1-B1  
if instantaneous option is selected R1 becomes timed and R2 becomes instantaneous

## Connection diagrams

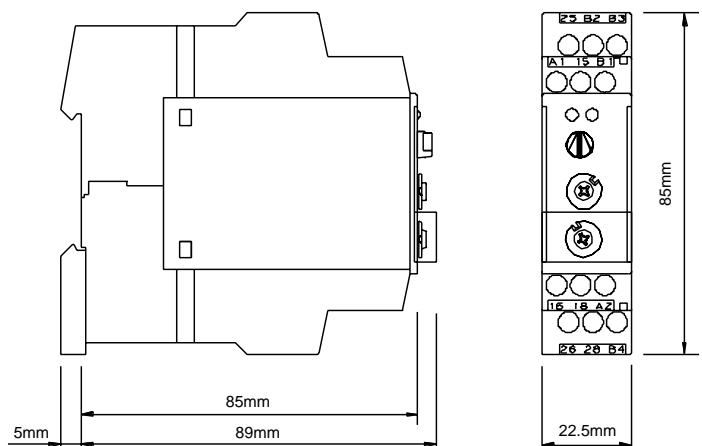
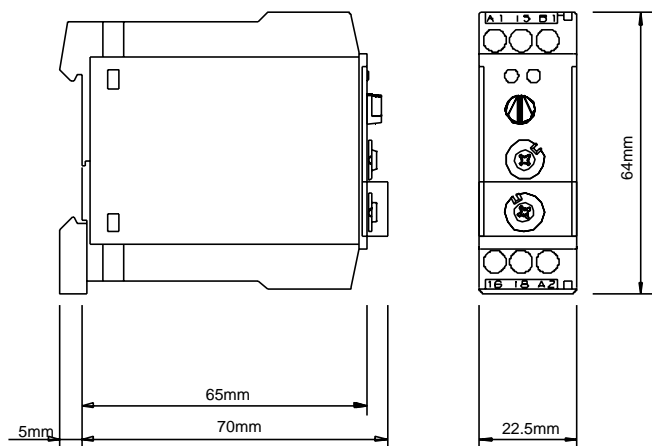


Control Function    Function Rp: without link    Function Ri: link A1-B1

## Dimensions

TDMA, TDEA, TDRA, TDIA, TDAA, TDAA, TDAB, TDSD, TDSF

TDMB



# Electronic On-Delay Timers TA8-A/TA8-SA

New short body on-delay timers, with 16 ranges selectable from front panel. Plug-in or panel mounting

- Timing ranges 0.05 secs to 60 hours
- 16 ranges, front panel selectable
- DPCO timed contacts or SPCO timed plus SPCO instantaneous contact versions
- New scale ranges for ease of time setting
- Instantaneous output with dial set at 0
- Improved resistance to electromagnetic interference
- Indicators for time range, time up and power on/timing
- 48-DIN
- Plug-in octal base
- Sockets available for panel, surface or DIN rail mounting
- Approved by standards: UL and CSA



## Options and ordering codes

DPCO	TA8-A	SPCO	TA8-SA
Timed contacts	24VAC/DC 100-240VAC 48-127VDC	Timed contacts plus instantaneous contacts	24VAC/DC 100-240VAC 48-127VDC
	<b>voltage</b>		<b>voltage</b>

## Specification

### Timing ranges (selectable)

Calibrated range – selected using screw in bottom left corner of front panel	Controlled timing range. Time unit selectable using the screw in the bottom right hand corner of the front panel			
	Time unit: 0.1 sec.	Time unit: sec.	Time unit: min.	Time unit: hrs.
0–6	0.05–0.6 secs.	0.5–6 secs.	0.5–6 mins.	0.5–6 hrs.
0–12	0.1–1.2	1–12	1–12	1–12
0–30	0.25–3	2.5–30	2.5–30	2.5–30
0–60	0.5–6	5–60	5–60	5–60

Repeat accuracy	±0.3% at max. setting time
Reset time	0.1 sec or less
Max. switching frequency	1800 times/hour
Allowable ambient temperature	-10 °C to +55 °C (Avoid ice on timer)
Mechanical life	20 million operations or more
Electrical life	100,000 operations or more at 250 V AC 5A resistive load
Allowable operating voltage range	0.85 to 1.1 times input voltage (0.9 to 1.1 at 55 °C)
Contact ratings	5A at 250 V AC resistive load
Power consumption	10VA at AC, 1W at DC
Supply frequency AC types	50/60 Hz
Dielectric strength	2,000 V AC rms. 1 min. between current carrying part and non current carrying part
	2,000 V AC rms. 1 min. between output contacts and control circuit
	1,000 V AC rms. 1 min. between open contacts
Insulation Resistance	100 MΩ or more at 500 V DC megger
Vibration	Mechanical durability: 10 to 55Hz, 0.75mm double amplitude
	Malfunction durability: 10 to 55Hz, 0.5mm double amplitude
Shock	Mechanical durability: 500m/s <sup>2</sup> (Approx. 50G)
	Malfunction durability: 100m/s <sup>2</sup> (Approx. 10G)

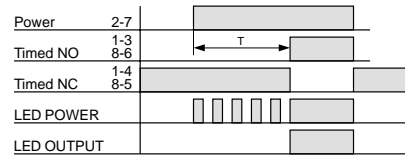
# Electronic On-Delay Timers

## TA8-A/TA8-SA continued

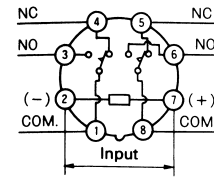


### Timing and wiring diagrams

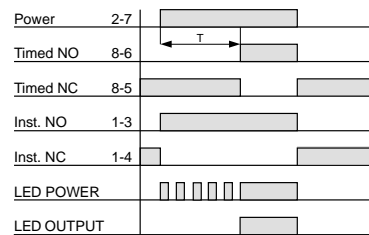
#### TA8-A



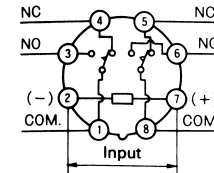
- When power is applied, the NO timed contacts make after the set time has elapsed.
- When power is removed the timer resets.



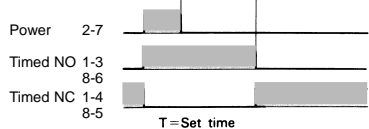
#### TA8-SA



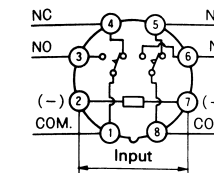
- Timed contact  
When power is applied, the NO contact makes after the set time has elapsed.  
When power is removed, the timer resets.
- Instantaneous contact  
When power is applied, the NO contact makes instantly.  
When power is removed, the timer resets.



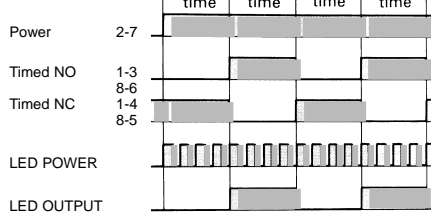
#### TA8-DA



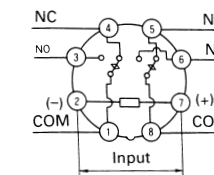
- When power (2-7) is ON, the NO timed contacts (1-3, 8-6) are instantly closed. When power is OFF, they are opened after the set time has elapsed.



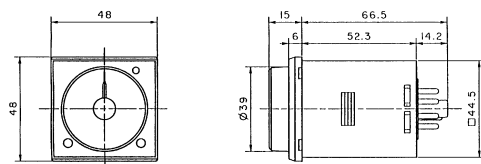
#### TA8-TA



- When power (2-7) is ON, the NO (1-3, 8-6) and the NC (1-4, 8-5) timed contacts are alternately closed to repeat the ON-OFF operations.
- When power is OFF the timer resets.

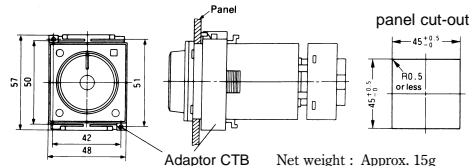


### Dimensions (mm)



Net weight : Approx. 100g

### Flush mounting

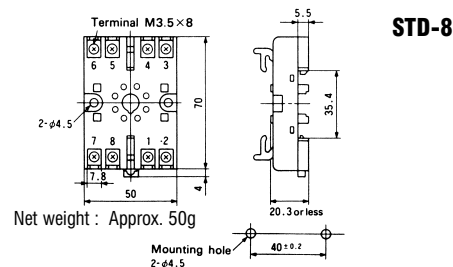


Adaptor CTB Net weight : Approx. 15g

Note: For flush mounting, an adaptor CTB is required (sold separately).  
When ordering, specify the adaptor type.

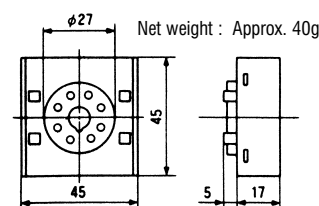
### Sockets

#### Surface/track mounting – screw terminal

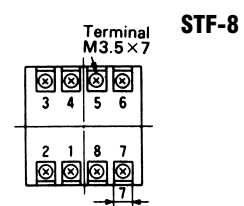


Net weight : Approx. 50g

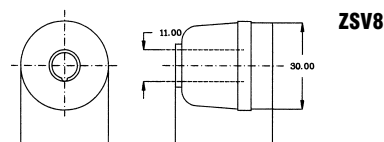
#### Flush mounting – screw terminal



Net weight : Approx. 40g



#### Flush mounting – solder terminal



# Electronic Off-Delay Timer TA8-DA

**IMO**

True off-delay timer with 4 ranges, selectable from the front panel. Plug-in or panel mounting.

- Timing ranges 3 secs to 12 mins
- 4 ranges, front panel selectable
- Indications for timing range and power on
- DPCO output relay
- 48-DIN
- Plug-in octal base
- Sockets available for panel, surface or rail mounting
- Approved by standards:  
UL (file no. E42419),  
CSA (file no. LR20479)



## Options and ordering codes

**TA8-DA**

24VAC/DC	<b>voltage</b>
100-240VAC	
48-127VDC	

## Specification

Timing ranges	Time setting range
0.6 min	0.05 to 0.6 min
1.2 min	0.1 to 1.2 min
6 min	0.5 to 6.0 min
12 min	1.0 to 12 min

Repeat accuracy	±0.3% at max. setting time
Max. switching frequency	1800 times/hour
Allowable ambient temperature	-10°C to +55°C (Avoid ice on timer)
Minimum power application time	2 sec.
Mechanical life	10 million operations or more
Electrical life	100,000 operations or more at 250 V AC 5A resistive load
Allowable operating voltage range	0.85 to 1.1 times input voltage (0.9 to 1.1 at 55°C)
Contact ratings	5A at 250 V AC resistive load
Power consumption	10VA at AC, 1W at DC
Supply frequency AC types	50/60 Hz
Dielectric strength	2,000 V AC rms. 1 min. between current carrying part and non current carrying part
	2,000 V AC rms. 1 min. between output contacts and control circuit
	1,000 V AC rms. 1 min. between open contacts
Insulation resistance	100 MΩ or more at 500 V DC megger
Vibration	Mechanical durability: 10 to 55Hz, 0.75mm double amplitude
	Malfuction durability: 10 to 55Hz, 0.5mm double amplitude
Shock	Mechanical durability: 500m/s <sup>2</sup> (Approx. 50G)
	Malfuction durability: 100m/s <sup>2</sup> (Approx. 10G)

# Electronic Twin Timer TA8-TA



Multi-range timer with independent on and off times from 0.05 sec. to 60 hours each

- Timing ranges 0.05 sec to 60 hours
- 16 timing ranges, front panel selectable
- Indications for time range, output status and power on
- DPCO output relay
- Easy-set dual concentric knob
- Independent on/off time units
- 48-DIN
- Plug-in octal base
- Sockets available for panel, surface or rail mounting
- Approved by standards: UL and CSA



## Options and ordering codes

**TA8-TA**

24VAC/DC  
100-240VAC **voltage**

## Specification

### Timing ranges (selectable)

Calibrated timing range	Controlled timing range Time unit: 0.1 sec.	Time unit: sec.	Time unit: min.	Time unit: hrs.
0-6	0.05-0.6 sec.	0.5-6 sec.	0.5-6 min.	0.5-6 hr.
0-12	0.1-1.2	1-12	1-12	1-12
0-30	0.25-3	2.5-30	2.5-30	2.5-30
0-60	0.5-6	5-60	5-60	5-60

Repeat accuracy	±0.3% at max. setting time
Max. switching frequency	1800 times/hour
Allowable ambient temperature	-10°C to +55°C (Avoid icing)
Mechanical life	20 million operations or more
Electrical life	100,000 operations or more at 250 V AC 5A resistive load
Allowable operating voltage range	0.85 to 1.1 times input voltage (0.9 to 1.1 at 55°C)
Contact ratings	5A at 250 V AC resistive load
Power consumption	10VA at 240 V AC
Supply frequency	50/60 Hz
Dielectric strength	2,000 V AC rms. 1 min. between current carrying part and non current carrying part
	2,000 V AC rms. 1 min. between output contacts and control circuit
	1,000 V AC rms. 1 min. between open contacts
Insulation resistance	100 MΩ or more at 500 V DC megger
Vibration	Mechanical durability: 10 to 55Hz, 0.75mm double amplitude
	Malfunction durability: 10 to 55Hz, 0.5mm double amplitude
Shock	Mechanical durability: 500m/S <sup>2</sup> (Approx. 50G)
	Malfunction durability: 100m/S <sup>2</sup> (Approx. 10G)

# Electronic Multifunction Timer TA11-A



New short-body on-delay, signal off-delay, one shot or flicker (re-cycling) timer modes, with 16 ranges, selectable from the front panel.

- 4 operation modes
- Timing ranges 0.05 secs to 60 hours
- 16 ranges, front panel selectable
- Indications for time range, operation mode, time up and power on/timing
- DPCO output relay
- New scale ranges for ease of time setting
- Instantaneous output with dial set at 0
- Improved resistance to electromagnetic interference
- 48-DIN
- Plug-in 11-pin base
- Sockets available for panel, surface or DIN rail mounting
- Approved by standards: UL and CSA



## Options and ordering codes

**TA11-A**

24VAC/DC	<b>voltage</b>
100-240VAC	
48-127VDC	

## Specification

### Timing ranges (selectable)

Calibrated range – selected using screw in bottom left corner of front panel	Controlled timing range. Time unit selectable using the screw in the bottom right hand corner of the front panel			
	Time unit: 0.1 sec.	Time unit: sec.	Time unit: min.	Time unit: hrs.
0-6	0.05-0.6 secs.	0.5-6 secs.	0.5-6 mins.	0.5-6 hrs.
0-12	0.1-1.2	1-12	1-12	1-12
0-30	0.25-3	2.5-30	2.5-30	2.5-30
0-60	0.5-6	5-60	5-60	5-60

Repeat accuracy	±0.3% at max. setting time
Reset time	0.1 sec or less
Max. switching frequency	1800 times/hour
Allowable ambient temperature	-10°C to +55°C (Avoid ice on timer)
Mechanical life	20 million operations or more
Electrical life	100,000 operations or more at 250 V AC 5A resistive load
Allowable operating voltage range	0.85 to 1.1 times input voltage (0.9 to 1.1 at 55°C)
Contact ratings	5A at 250 V AC resistive load
Power consumption	10VA at AC, 1W at DC
Supply frequency AC types	50/60 Hz
Dielectric strength	2,000 V AC rms. 1 min. between current carrying part and non current carrying part
	2,000 V AC rms. 1 min. between output contacts and control circuit
	1,000 V AC rms. 1 min. between open contacts
Insulation resistance	100 MΩ or more at 500 V DC megger
Vibration	Mechanical durability: 10 to 55Hz, 0.75mm double amplitude
	Mechanical durability: 10 to 55Hz, 0.5mm double amplitude
Shock	Mechanical durability: 500m/s <sup>2</sup> (Approx. 50G)
	Malfuction durability: 100m/s <sup>2</sup> (Approx. 10G)



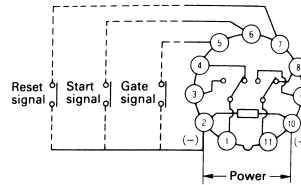
# Electronic Multifunction Timer TA11-A continued



## Wiring diagram and operating modes

Mode selected by turning the screw in the top left hand corner of the front panel.

CAUTION: Do not touch terminals 5, 6 and 7 while power is applied to the timer.



### 1. On-delay PO

- Turn the mode selector until PO is displayed.
- When power is ON, applying the start signal turns the NO (normally open) timed contact ON after the set time has elapsed.
- For power-on-delay operation, the start signal terminals (2 and 6) must be connected in advance.
- The timer is reset by the removal of power or by applying a reset signal.

### 2. Flicker (Repeat cycle) FL

- Turn the mode selector until FL is displayed.
- When power is ON, applying the start signal turns the timed contact ON and OFF repeatedly at the set time intervals.
- The timer is reset by the removal of power or by applying a reset signal.

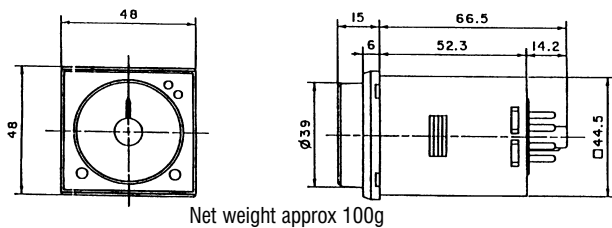
### 3. One-shot momentary actuation OS

- Turn the mode selector until OS is displayed.
- When power is ON, applying the start signal instantly turns the NO timed contact ON and turns it OFF after the set time has elapsed.
- Removing power while the timer is in operation or applying a reset signal resets the timer.

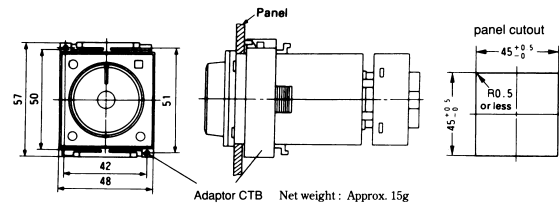
### 4. Signal off-delay SF

- Turn the mode selector until SF is displayed.
- When power is ON, applying the start signal instantly turns the NO timed contact ON. Removing the start signal turns the contact OFF after the set time has elapsed.
- Removing power while the timer is in operation or applying a reset signal resets the timer.

## Dimensions (mm)



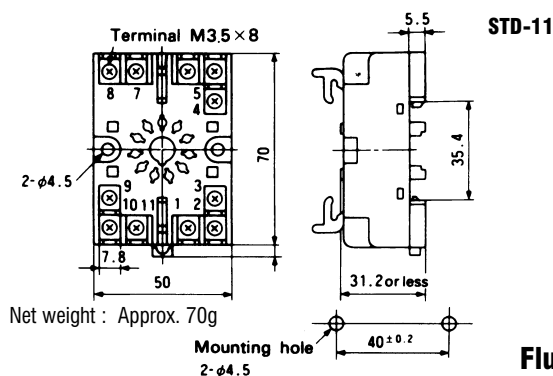
## Flush mounting



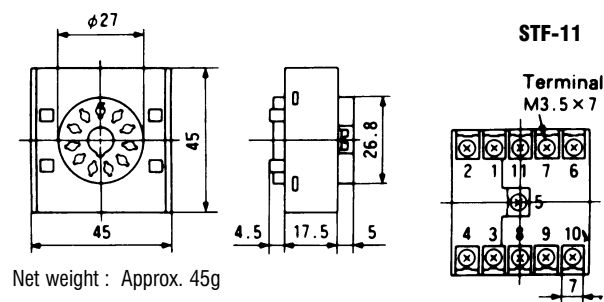
Note: For flush mounting, an adaptor CTB is required (sold separately)

## Sockets

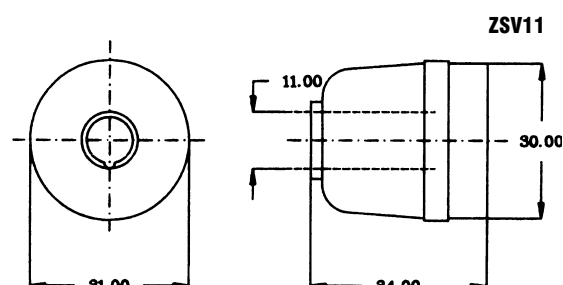
### Surface/track mounting – screw terminal



### Flush mounting – screw terminal



### Flush mounting – solder terminal

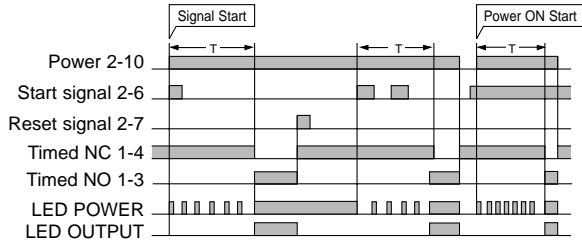


# Electronic Multifunction Timer TA11-A continued

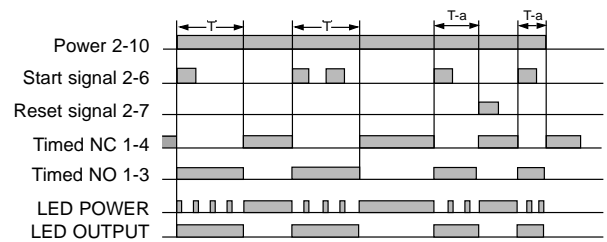


## Timer

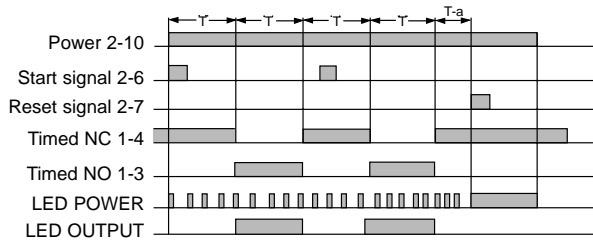
### 1. On-delay PO



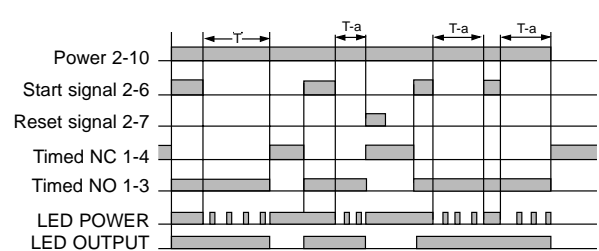
### 3. One-shot momentary actuation OS



### 2. Flicker (Repeat cycle) FL



### 4. Signal off-delay SF



Notes:

T = Set time, T-a=Time period within the set time.

- Applying a gate signal pauses the operation, (timing does not continue during a gate signal). Timing will resume at the point where it left, as soon as the gate signal is removed.
- Each signal can be input by short circuiting the relevant terminals.
- Power LED lights up when power is ON, but flickers during timing.

# Electronic Miniature On-Delay Timer TY4

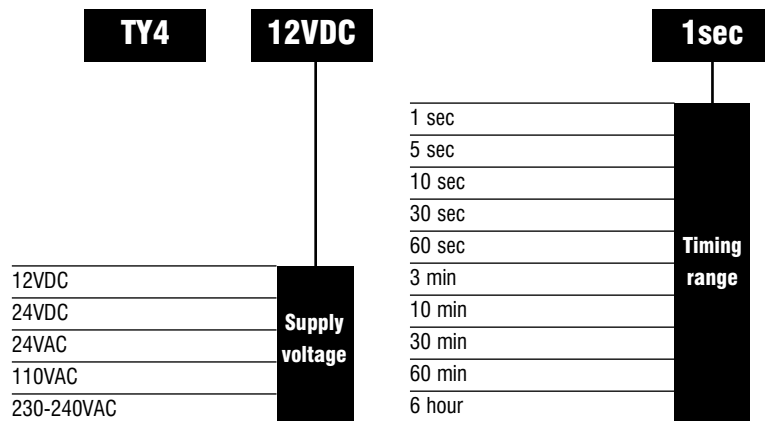


Miniature on-delay, plug-in timer. Different models with a range of settings between 0.1 sec and 6 hours

- Four-pole changeover contacts rated at 3A @ 240VAC
- AC and DC supply versions
- Indications for time range, time up and power on
- Pin-out compatible with industry standard, 4-pole plug-in relays
- Sockets available for panel, surface, rail or printed-circuit board mounting
- Approved by standards: UL (file no. E44592), CSA (file no. LR60859)



## Options and ordering codes



## Specification

Timing range	Time setting range
1 sec	0.1 to 1 sec
5 sec	0.4 to 5 sec
10 sec	1 to 10 sec
30 sec	2 to 30 sec
60 sec	4 to 60 sec

Timing range	Time setting range
3 min	0.25 to 3 min
10 min	1 to 10 min
30 min	2 to 30 min
60 min	4 to 60 min
6 hour	0.5 to 6 hours

Repeat accuracy	±0.1% at max. setting time
Reset time	0.1 sec or less
Max. switching frequency	1800 times/hour
Allowable ambient temperature	-10°C to +50°C
Mechanical life	50 million operations
Electrical life	800,000 operations at 1A 240VAC
Allowable operating voltage range	0.85 to 1.1 times input voltage (230-240VAC type, 0.89 to 1.1 times input voltage range)
Contact ratings	3A at 240VAC resistive load
Power consumption	1.9VA at 110VAC, 2.1VA at 240VAC, 1.1W at 24VDC
Supply frequency AC types	50/60Hz
Dielectric strength	2000VAC rms. 1 min. between current carrying part and non current carrying part
	1500VAC rms. 1 min. between output contacts and control circuit
	1000VAC rms. 1 min. between open contacts
Insulation Resistance	100 MΩ or more at 500VDC megger
Vibration	Mechanical durability: 16.7Hz, 4mm double amplitude
	Malfunction durability: 10 to 55Hz, 0.5mm double amplitude
Shock	Mechanical durability: 1000m/S <sup>2</sup> (Approx. 100G)
	Malfunction durability: 50m/S <sup>2</sup> (Approx. 5G)

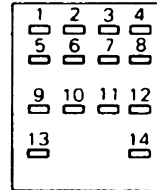
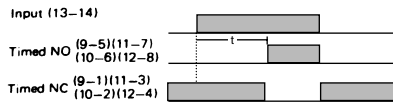
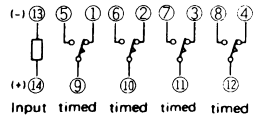
# Electronic Miniature On-Delay Timer TY4 continued



## Wiring and timing diagrams

## Terminal arrangement

### TY4



View from back

## Dimensions (mm)

