DIN Timers TD

Technical Datasheet

Key Features

- 17.5mm or 22.5mm DIN Rail mounting Electronic Timers
- Wide coil operation, 12V to 320V AC/DC
- Multi time range / Multi function
- ON-Delay, OFF-Delay, Asymetrical, Star/Delta versions
- Perfect to fit in modular enclosure
- Protection against overvoltage and reverse polarity
- Self-extinguishing plastic housing

Options & Ordering Codes

TD	M10

Series

DIN Rail Mount Timers	XX

Timer Type

Multi-function	M10
Multi-function 12VAC/DC	M10-12
Star/Delta 20-500ms	SD1
Asymetrical 5 function	AS

Specification

		TDM10-12	TDM10	TDAS	TDSD1
Operation Modes		A, B, C, D, E, F, G, H, I, K		ND, FD, NFD, Fon, Foff	Star Delta
Time Range		0.1 sec - 10 days	0.1 sec - 10 days	0.1 sec - 10 days	λ1-30 sec / λ Δ20-500ms
Accuracy		30ppm			
Supply Voltage		12V AC/DC / 180-265V AC	24-300V AC/DC, ±10%, 45-65Hz		150-500V AC, 45-65Hz
Nominal Power Consumption		24-320V DC max 1W; 24V AC 2.5VA; 48V AC 4.46VA; 110V AC 1.76VA; 220V AC 2.53VA			
Input Signal Control Contact Must Be 90% of A1-A2		Power On - Contact Control		Power On	
Contact Configuration		1 C/O Contact			2 Independant C/O Contacts
Control Output		10A @ 250V AC / 3A @ 30V DC			
Life Expectancy	Electrical	5×10^4 (5A @ 250V AC),			
	Mechanical	10^7 Operations			
Ambient Allowable Temperature	Storage	-40 to +85°C			
	Operating	-25 to +70°C			
IP Rating		IP20			
Terminals		2.5mm² Stranded, 4mm² Solid or 2x1.5mm² Solid			
Warranty / Certification		2 Years / CE / UL / cUL			

DIN Timers TDM10 / TDM10-12

IMO

Technical Datasheet

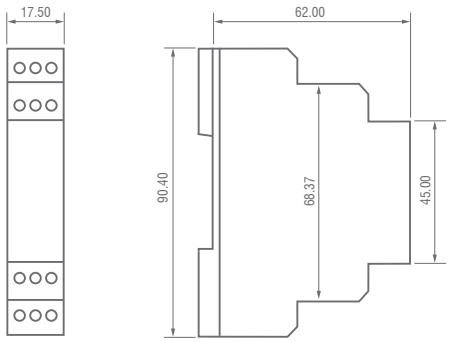
Key Features

- Multi function time delay
- Multi time range
- Compact design
- TDM10: Universal voltage input 24-300V AC/DC
- TDM10-12: Voltage input 12V AC/DC & 180-265V AC
- Single module size

Specification

	TDM10-12	TDM10
Adjustable Values / Time Range	1 second	
	10 second	
	100 second	
	1 minute	
	10 minute	
	1 hour	
	10 hour	
	100 hour	
	1 day	
	10 day	
Multiplier	0.1 - 0.2 - 0.3 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 1	

Dimensions (mm)

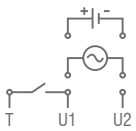


Indication Lights Legend

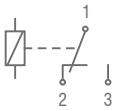
LED	State	Description
On / t	ON	Power On
	OFF	Power Off
Relay Output	ON	Output relay energised
	OFF	Output relay de-energised
M1, M2	M1, M2 are used to indicate which function is currently used. See charts page 3 for more details.	

Connections - TDM10

Power Input 24..300V AC/DC

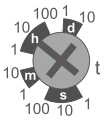


Relay

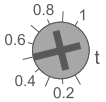


Time Settings

Time range selector switch selects full scale time range. The t multiplier selector switch provides fine adjustment of time value, t, within the full scale time range. Selector switch positions are latched upon startup to avoid accidental changes during operation. Therefore changing selector switch positions have no effect when the device is operational. The below example shows how to set a t value.



Time Range



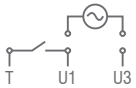
t Multiplier

In the above figure: t=10h x 0.5 = 5 hour

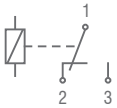
Note: All the pot values are digitalised. Cannot be set to mid values.

Connections - TDM10-12

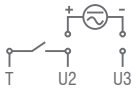
Power Input 180..256V AC



Relay



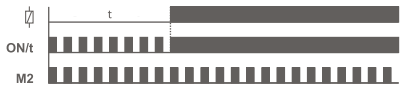
Power Input 12V AC/DC



DIN Timers TDM10 / TDM10-12

Technical Datasheet

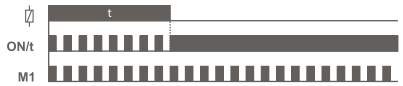
Mode Functions



a

A On Delay

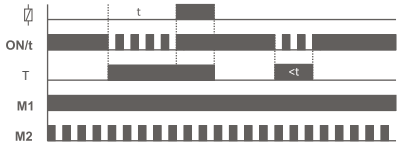
The output relay is initially de-energised after an adjustable time delay, t.



b

B Off Delay

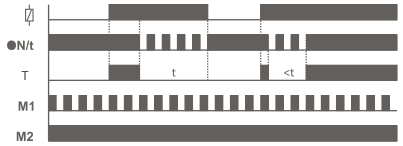
The output relay is intially energised and de-energised after an adjustable time delay, t.



c

C On delay with control input

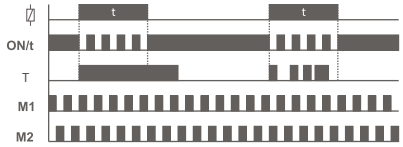
The output relay is initally de-energised. A contact closure on K input triggers an adjustable time delay, t, which energises the output relay when expired. The output relay stays energised as long as the K input is active. Delay time, t, is cleared when the contact on K input opens.



d

D Off delay with control input

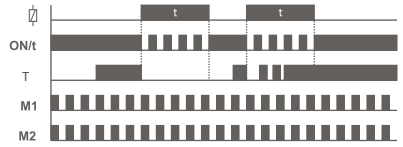
The output relay is initally de-energised and energised when a contact closure on K input is detected. A contact release on K input triggers an adjustable time delay, t, which de-energises the output relay when expired. Reclosure of the contact on K input before the time delay is expired restarts time delay, t, and keeps the output relay energised.



e

E Rising edge triggered Off delay

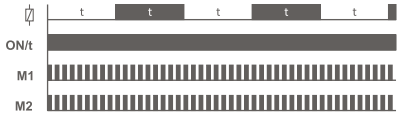
The output relay is initially de-energised. A contact closure on K input both energised the output relay and triggers an adjustable time delay, t, which de-energises the output relay when expired. During the time delay, K input is insensitive to state changes and becomes sensitive when time delay, t, expired.



f

F Falling edge triggered Off delay

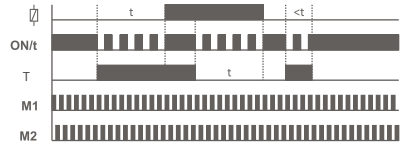
The output relay is initially de-energised. A state change of the contact on K input from closed to open both energises the output relay and triggers an adjustable time delay, t, which de-energises the output relay when expired. During the time delay, K input is insensitive to state changes and becomes sensitive when time delay t, expired.



g

G Off flasher

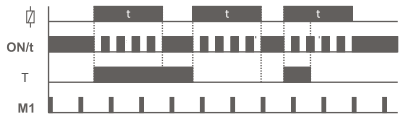
The output relay is initially de-energised and energised after an adjustable time delay, t, and stays energised for the period, t, and the de-energised. This loop is repeated until the device is powered off.



h

H On and Off delay with control input

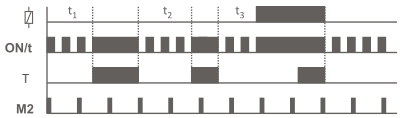
The output relay is initially de-energised. A contact closure on K input triggers an adjustable time delay, t, which energises the output relay when expired. Similarly contact release of K input triggers the time delay, t, which de-energises the output relay when expired. Delay time, t, is cleared when the contact state of K input changes.



i

I Adjustable pulse output with control input

The output relay is initially de-energised. A state change on K input both energises the output relay and triggers an adjustable time delay, t, which de-energises the output relay when expired. During the time delay, K input is insensitive to state changes and becomes sensitive when time delay, t, expired.



k

$t = t_1 + t_2 + t_3$

K On delay with memory

The output relay is initially de-energised. If K input is open, adjustable time delay, t, counts down and output relay energises when t is expired. Any contact closure on K input pauses the count down process, and the process continues when the contact release on K input occurs. A contact release is needed to restart the cycle, after the output relay is energised.

On
Off