22.5mm DIN rail mounting Electronic Timers
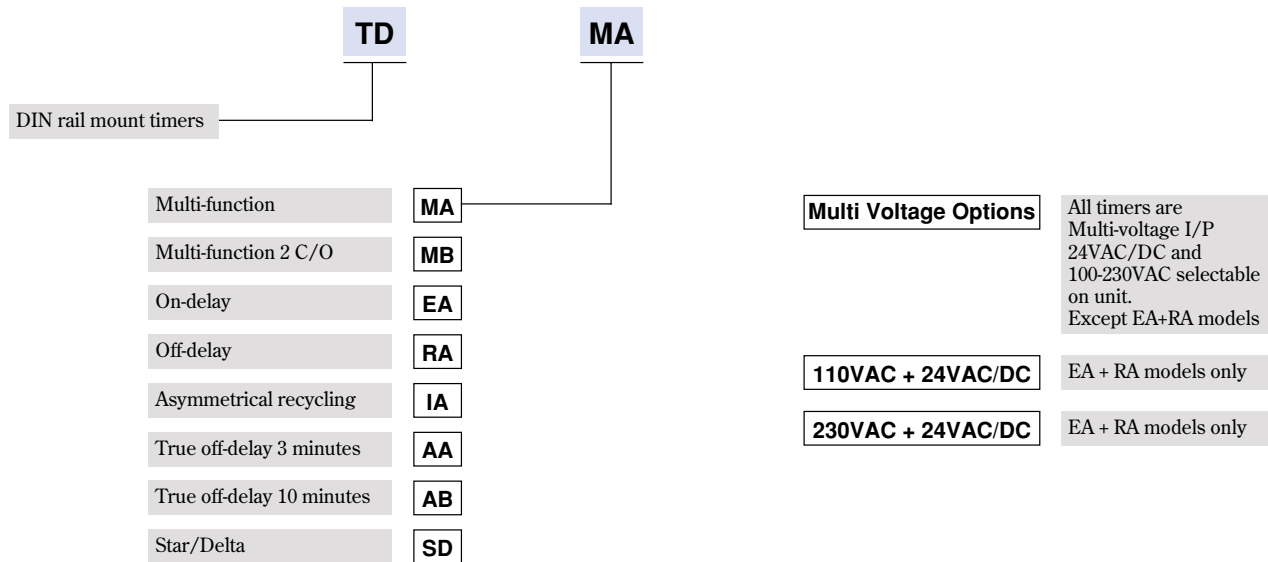
- AC/DC coil operation
- Multi-time range
- Multi-function, On-delay, Off-delay and Star/Delta versions
- Voltage range selectable
- Marking plate cover

Options and ordering codes

| **TD** | | **MA** |

DIN rail mount timers

Multi-function	**MA**
Multi-function 2 C/O	**MB**
On-delay	**EA**
Off-delay	**RA**
Asymmetrical recycling	**IA**
True off-delay 3 minutes	**AA**
True off-delay 10 minutes	**AB**
Star/Delta	**SD**

Multi Voltage Options	All timers are Multi-voltage I/P 24VAC/DC and 100-230VAC selectable on unit. Except EA+RA models
110VAC + 24VAC/DC	EA + RA models only
230VAC + 24VAC/DC	EA + RA models only

Specification

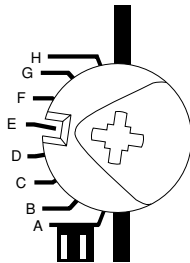|	**TDMA**	**TDMB**	**TDEA**	**TDRA**	**TDIA**	**TDAA**	**TDAB**	**TDSD**
Operation modes	A,B,C,D E,F,G,H	A,B,C,D E,F,G,H	A	B	Rp,Ri	T	T	S
Time range	0.05sec- - 10 days	0.05sec- - 10 days	0.05sec- - 10 days	0.05sec- - 10 days	0.05sec- - 10 days	0.1sec- - 3 min	0.1sec- - 10 min	0.5sec-3minY△ 40-100ms Y△
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 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
Input signal Control contact must be 90% of A1-A2	Power on control contact	Power on control contact	Power on	Power on control contact	Power on	Power on	Power on	Power on
Contact configuration	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
Control output	8A@250VAC	8A@250VAC	5A@250VAC	5A@250VAC	5A@250VAC	5A@250VAC	5A@250VAC	8A@250VAC
Life expectancy Electrical Mechanical	400,000 30 x 10⁶	400,000 30 x 10⁶	100,000 10 x 10⁶	100,000 10 x 10⁶	400,000 30 x 10⁶	100,000 30 x 10⁶	100,000 30 x 10⁶	400,000 30 x 10⁶
Allowable ambient temperature				-25 ˚C upto +55˚C				
IP rating Enclosures Terminals				IP40 IP20				
Terminals				Box clamp screw terminal upto 4mm²				

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 contct (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 deenergises 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 reengaged to "the unit before t has elapsed, the time already elapsed is canceled" and starts again next time the supply voltage is interrupted.
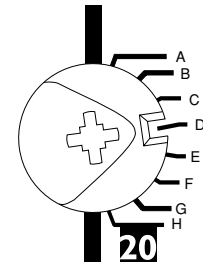
IMO

Function switches

For IMO type TDMB
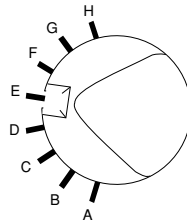
Positions of function switch
with one contact as
instaneous c.t.

Both contacts delayed

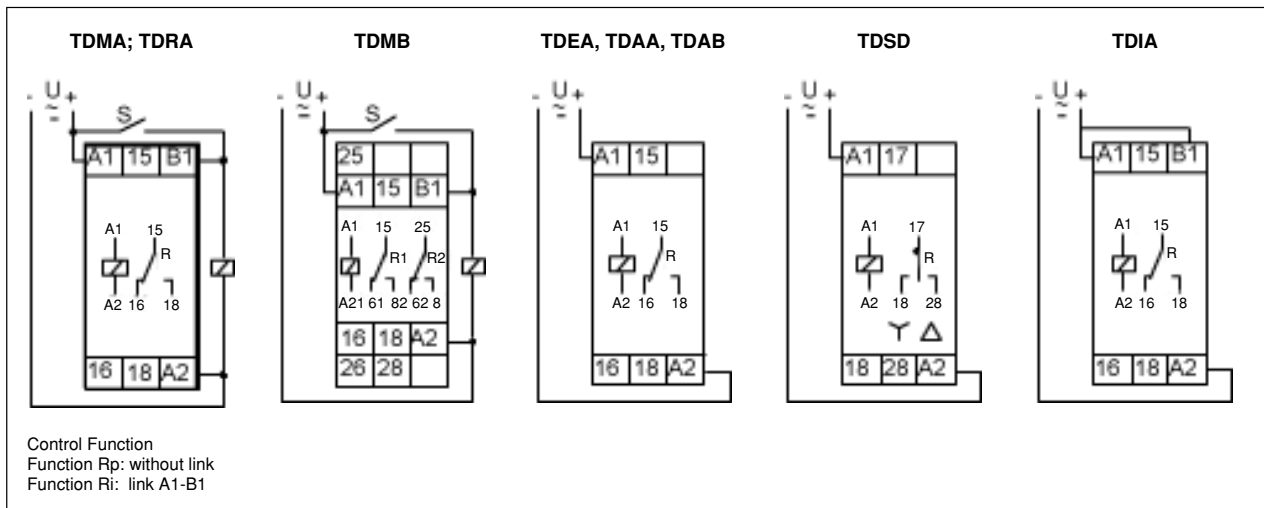|	
H	pulse detection
G	flashing pause first
F	single shot
E	ON-delay controlled by trigger input
D	single shot trailing edge
C	single shot pulse operated
B	Off-delay
A	On-delay

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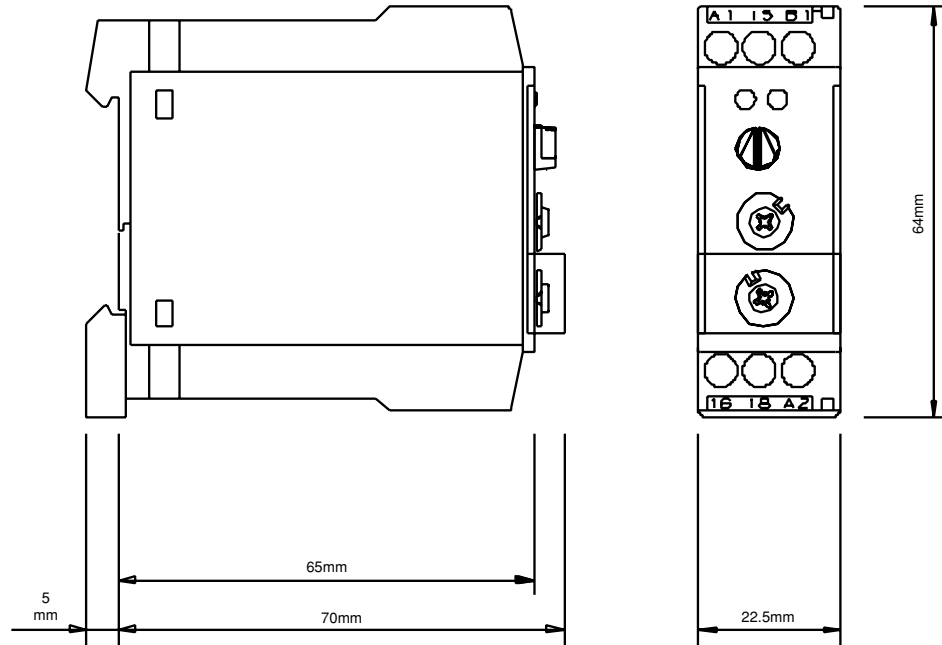Start function B, C, D, E and H by control contract A1-B1

For IMO type TDMA

Start function B, C, D, E and H by control contract A1-B1

Connection diagrams

TDMA; TDRA	TDMB	TDEA, TDAA, TDAB	TDSD	TDIA

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

IMO

Dimensions

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

64mm

65mm
5 mm
70mm
22.5mm

TDMB

85mm

85mm
5 mm
89mm
22.5mm