



PTMA / PTMB DTMA / DTMB



MULTI TIMER

Difference	Multifunction - Multirange - Monovoltage
Operating principle	<p>10 modes according to the "FUNCTION" selector (see description of the functions at page 2):</p> <ul style="list-style-type: none"> - <u>Without using the external input:</u> <ul style="list-style-type: none"> A - Delay on operate B - Interval on operate - <u>Using the external input:</u> <ul style="list-style-type: none"> A - Delay on operate, with time storage, without memory B - Interval on operate, with time storage, without memory C - Delay on operate, when the input is activated D - Interval on operate, while the input is activated E - Delay on operate, when the input is deactivated F - Interval on operate, when the input is deactivated G - Delay on operate, when the input is activated and when it is deactivated H - Interval on operate, when the input is activated and when it is deactivated
Time range	From 10 ms to 100 h, divided in 8 ranges (see table Reference).
Leds indications	<p>Power on: Green</p> <p>Relay on: Red</p>
Repeating precision	± 0,02%
Precision	± 0,6%. With supply voltages 901 or 902, ± 1,2%.
Power on	< 100 ms
Reset	By disconnecting the supply for longer than 20 ms
External input	<ul style="list-style-type: none"> - Free potential contact (terminals 6-7 [PTMx]; Y1-Z1 [DTMx]). - Sensor NPN or PNP, 10 mA / 24 VDC (terminals 5-6-7 [PTMx]; Y1-Z1-Z2 [DTMx]). <p>Minimum pulses frequency: 6 ms</p>
Adjustment mode	<p>1st - Select the function.</p> <p>2nd - Select the range. The maximum value (top of scale) must be the nearest possible to the time you are going to set.</p> <p>3rd - Set the time according to the 0-10 relative scale.</p> <p>Example: If you want to set 45 seconds, select the range "10..100 s". In this case each division corresponds to 9 seconds, so you must place the "TIME" button in the "5". It is recommended to check the time and refine the adjustment if required.</p>

Reference	HOUSING	FUNCTION	OUTPUT	SUPPLY	RANGE	Adjustment buttons
P Plug-in D DIN rail	T M Multitimer	A SPDT B DPDT		U24 24 VAC/DC 724 24 VDC 024 24 VAC 110 110..125 VAC 230 220..240 VAC 400 380..415 VAC 901 15..70 VAC/DC 902 60..240 VAC/DC	10..100 ms 0,1..1 s 1..10 s 10..100 s 1..10 min 10..100 min 1..10 h 10..100 h	

To compose the reference, select one option of each column. Example: PTMA U40 100

Connection diagram	PTMA / PTMB	DTMA / DTMB

FUNCTIONS AND DIAGRAMS

WITHOUT USING THE EXTERNAL INPUT

Delay on operate

When the supply voltage is connected the relay remains released and the time circuit starts up. Once the preset time is elapsed, the relay operates and remain so for an undefined time.



Interval on operate

When the supply voltage is connected the relay operates immediately and the time circuit starts up. Once the preset time is elapsed, the relay releases and remain so for an undefined time.

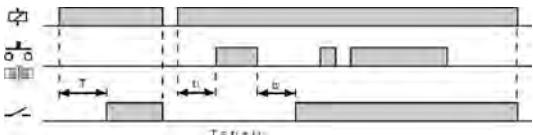


DELAY ON OPERATE, USING THE EXTERNAL INPUT

With time storage, without memory

When the supply voltage is connected the relay remains released and the time circuit starts up. If the external input is activated before the preset time is elapsed, the time circuit stops. When the input is released, the time circuit follows from the point where it stopped previously. When the time accumulated is greater than the preset time, the relay operates and remains so for an undefined time.

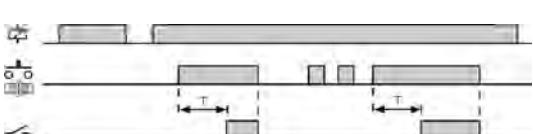
The absence of power supply causes the time and relay reset.



While the input is activated

When the supply voltage is connected, if the external input is not activated there is no effect on the system. When the input is activated the time circuit starts up. Once the preset time is elapsed, the relay operates and remains so until the external input or the supply voltage are deactivated.

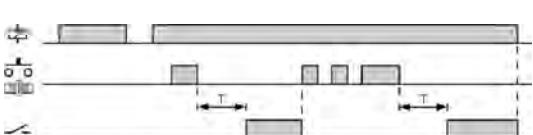
The succession of input pulses with a cadence less than the preset time brings about the reset of the time.



When the input is deactivated

When the supply voltage is connected there is no effect on the system regardless of the state of the external input. When the input is activated, the relay remains released and when it is deactivated the time circuit starts up. Once the preset time is elapsed, the relay operates and remains so until the input is again activated or the supply voltage is disconnected.

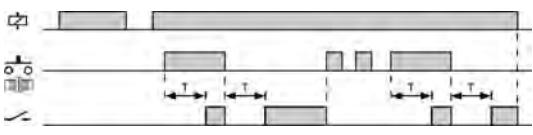
The succession of input pulses with a cadence less than the preset time brings about the reset of the time.



When the input is activated and when it is deactivated

When the supply voltage is connected there is no effect on the system regardless of the state of the external input. When the input is activated, the relay remains released and the time circuit starts up. Once the preset time is elapsed, the relay operates. When the input is deactivated, the relay releases and the time circuit starts up again. Once the preset time is elapsed, the relay operates.

The succession of input pulses with a cadence less than the preset time brings about the reset of the time.

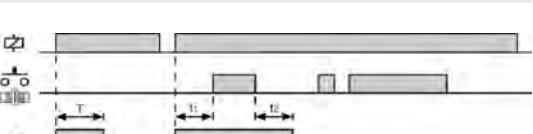


INTERVAL ON OPERATE, USING THE EXTERNAL INPUT

With time storage, without memory

When the supply voltage is connected the relay operates immediately and the time circuit starts up. If the external input is activated before the preset time is elapsed, the time circuit stops. When the input is released, the time circuit follows from the point where it stopped previously. When the time accumulated is greater than the preset time, the relay releases and remains so for an undefined time.

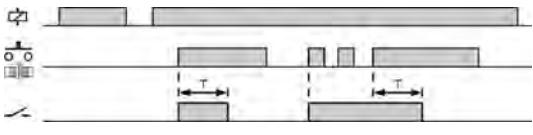
The absence of power supply causes the time and relay reset.



While the input is activated

When the supply voltage is connected, if the external input is not activated there is no effect on the system. When the input is activated the relay operates immediately and the time circuit starts up. Once the preset time is elapsed, the relay releases and remains so until the external input is again activated.

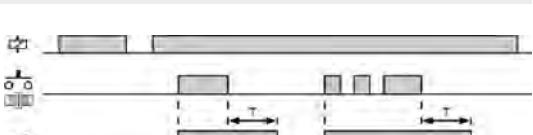
The succession of input pulses with a cadence less than the preset time brings about the reset of the time.



When the input is deactivated

When the supply voltage is connected, if the external input is not activated there is no effect on the system. When the input is activated the relay operates immediately and when it is deactivated the time circuit starts up. Once the preset time is elapsed, the relay releases and remains so until the external input or the supply voltage are deactivated.

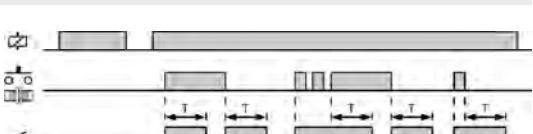
The succession of input pulses with a cadence less than the preset time brings about the reset of the time.

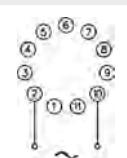
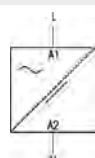
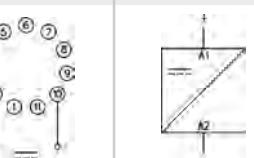
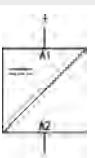
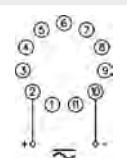
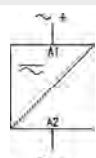
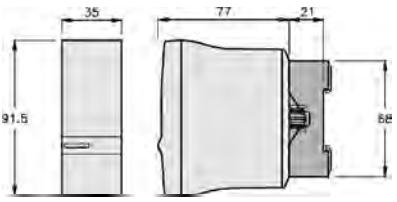
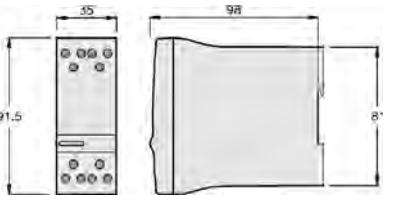


When the input is activated and when it is deactivated

When the supply voltage is connected there is no effect on the system regardless of the state of the external input. When the input is activated, the relay operates immediately and the time circuit starts up. Once the preset time is elapsed, the relay releases. When the input is deactivated, the relay operates and the time circuit starts up again. Once the preset time is elapsed, the relay releases.

The succession of input pulses with a cadence less than the preset time brings about the reset of the time.



Output relays	PTMA		PTMB		DTMA		DTMB	
	AC	10 A / 250 V	8 A / 250 V		10 A / 250 V	8 A / 250 V		
	DC	0,4 A / 200 V	0,25 A / 200 V		0,4 A / 200 V	0,25 A / 200 V		
		10 A / 24 V	8 A / 24 V		10 A / 24 V	8 A / 24 V		
	AC	5 A / 250 V	2,5 A / 250 V		5 A / 250 V	2,5 A / 250 V		
	DC	5 A / 24 V	4 A / 24 V		5 A / 24 V	4 A / 24 V		
	Mechanical life	> 30 x 10 ⁶ operations			> 30 x 10 ⁶ operations			
	Max. switching rate, mech.	72.000 operations / hour			72.000 operations / hour			
	Electrical life at full load	360 operations / hour			360 operations / hour			
	Contact material	AgNi 90/10			AgNi 90/10			
	Maximum voltage	440 VAC			440 VAC			
	Operating voltage	250 VAC			250 VAC			
	Volt. between changeovers	2500 VAC			2500 VAC			
	Voltage between contacts	1000 VAC			1000 VAC			
	Voltage coil/contact	5000 VAC			5000 VAC			
	Distance coil/contact	10 mm			10 mm			
	Isolation resistance	> 10 ⁴ MΩ			> 10 ⁴ MΩ			
Supply	AC		DC		ACDC		ACDC	
	PTMA / PTMB	DTMA / DTMB	PTMA / PTMB	DTMA / DTMB	PTMA / PTMB	DTMA / DTMB	PTMA / PTMB	DTMA / DTMB
								
	Galvanic isolation	4000 v	No		9XX: 2500 v ~	UXX: No	9XX: 1,6 W	UXX: 1,7 W
	Consumption	1,6 VA						
	Frequency	50/60 Hz						
	Operating margins	± 15%			± 10%			
Constructive and environmental data	Positive	-	Terminal 2	Terminal A1	Terminal 2	Terminal A1	Terminal 2	Terminal A1
	Protected polarity	-		Yes				Yes
	PTMA / PTMB		DTMA / DTMB					
	Voltage phase-neutral	300 V	300 V					
	Oversupply category	III	III					
	Rated impulse voltage	4 kV	4 kV					
	Pollution degree	2	2					
	Protection	IP 20 B	IP 20					
	Approximate weight	250 g	280 g					
	Storage temperature	-50°C..+85°C	-50°C..+85°C					
	Operating temperature	-20°C..+50°C	-20°C..+50°C					
	Humidity	30..85% HR	30..85% HR					
Dimensions	Housing	Cyclooy - Light grey	Cyclooy - Light grey					
	Socket	Lexan - Light grey	-					
	Leds cover	Lexan - Transparent	Lexan - Transparent					
	Button, terminal block, clip	Technyl - Dark blue	Technyl - Dark blue					
	Pins of the socket	Nickel brass	-					
	Pins of the terminal block	-	Brass					
	Approvals	Designed and manufactured under EEC standards. Electromagnetic compatibility, directive EMC 2004/108/CEE (UNE-EN 61000 6-4/2007/A1:2011, UNE-EN 61000 6-2/2006). Electric safety, directive LVD 2006/95/CEE (UNE-EN-60204-1/2007/A1:2009; UNE-EN 61010-1/2011). Directive about certain hazardous substances 2011/65/CE de 8/06/2011 Pb, Hg, Cd, Cr+6, PBB, PBDE. Plastics: UL 91 V0.						
	PTMA / PTMB		DTMA / DTMB					
								

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