DISIBEINT

PTNA / PTNB
DTNA / DTNB

MULTITIMER

Difference	Multifunction - Multirange - Monovoltage. In the functions activated through external input, the relay does one operation when the supply voltage is applied.
Operating principie	10 modes according to the “FUNCTION” selector (see description of the functions at page 2): - Without using the external input: A - Delay on operate B - Interval on operate - Using the external input: 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	Power on: Green Relay on: Red
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	- Free potential contact (terminals 6-7 [PTNx]; Y1-Z1 [DTNx]). - Sensor NPN or PNP, 10 mA / 24 VDC (terminals 5-6-7 [PTNx]; Y1-Z1-Z2 [DTNx]). Minimum pulses frequency: 6 ms
Adjustment mode	1st - Select the function. 2nd - Select the range. The maximum value (top of scale) must be the nearest possible to the time you are going to set. 3rd - Set the time according to the 0-10 relative scale. 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.

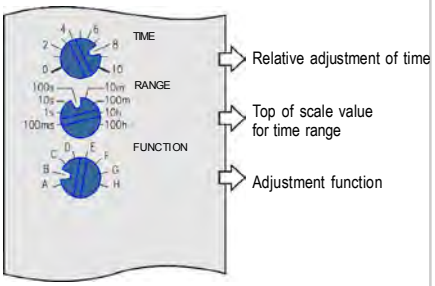
Reference

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

100

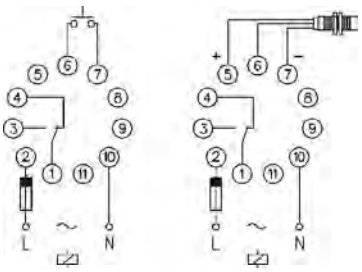
To compose the reference, select one option of each column. Example: **PTNA U24 100**

Adjustment buttons

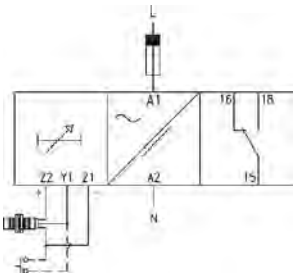


Connection diagram

PTNA / PTNB



DTNA / DTNB



FUNCTIONS AND DIAGRAMS

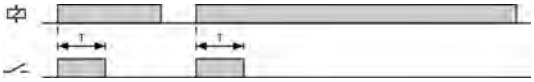
WITHOUT USING THE EXTERNAL INPUT

Delay on operate

When the supply voltage is connected, the relay remains released and the time circuit starts up. After the pre-set time the relay operates. It remains in the condition an undefined time.

Interval on operate

When the supply voltage is connected the relay operates inmediately. After the pre-set time, the relay releases and remains so for an indefinite period of time.

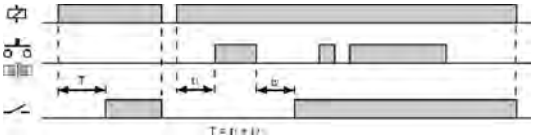


DELAY ON OPERATE, USING THEN EXTERNAL INPUT

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.

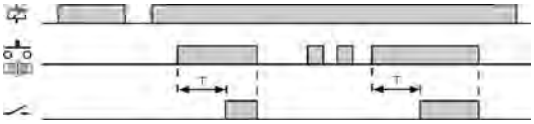
The absence of power supply causes the time and relay reset.



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 the time circuit starts up. Once the preset time is elapsed, the relay operates. 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 the circuit time starts up. Once the preset time is elapsed, the relay operates. Both the input is activated, and the input is deactivated, the relay releases and the time circuit starts up again. Once the preset time is elapsed, the relay operates.

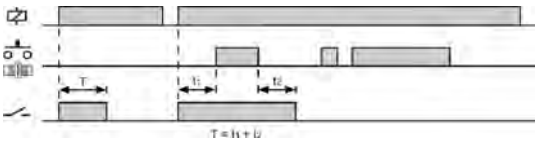
The succession of input pulses with a cadence less than the preset time brings about the

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, the relay operates immediately. 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

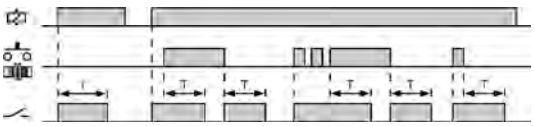
When the supply voltage is connected, the relay operates immediately, and the time circuit starts up. One the preset time is elapsed, the relay remains so. When the input is activated the relay operates immediately and when it is deactivated the time circuit starts up. Once the preset time is elapsed, 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.

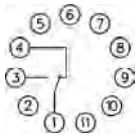
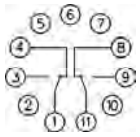
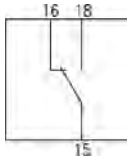
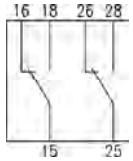
When the input is activated and when it is deactivated

When the supply voltage is connected the relay operates immediately, and the time circuit starts up. Once the preset time is elapsed, the relay releases. Both the input is activated and the input is deactivated, the relay operates immediately and the time circuit starts up. Once the preset time is elapsed, the relay releases.

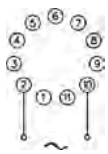
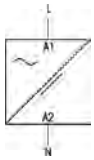
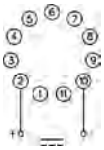
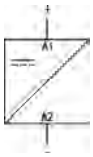
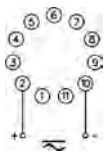
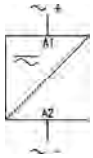
The succession of input pulses with a cadence less than the preset time brings about the reset of the time.



Output relays

		PTNA	PTNB	DTNA	DTNB
					
Resistive load	AC	10A / 250 V	10A / 250 V	10A / 250 V	10A / 250 V
	DC	0,4 A / 200 V 10 A / 24 V	0,4 A / 200 V 10 A / 24 V	0,4 A / 200 V 10 A / 24 V	0,4 A / 200 V 10 A / 24 V
Inductive load	AC	10 A / 250 V	10 A / 250 V	10 A / 250 V	10 A / 250 V
	DC	0,4 A / 200 V 10 A / 24 V	0,4 A / 200 V 10 A / 24 V	0,4 A / 200 V 10 A / 24 V	0,4 A / 200 V 10 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	

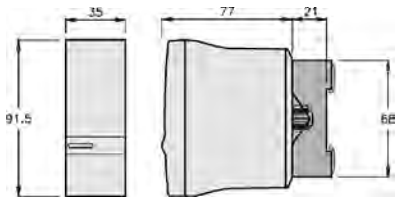
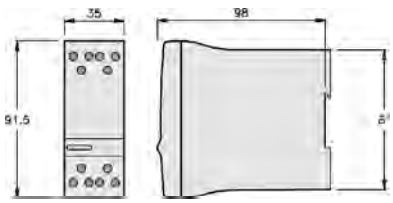
Supply

	AC		DC		ACDC	
	PTNA / PTNB	DTNA / DTNB	PTNA / PTNB	DTNA / DTNB	PTNA / PTNB	DTNA / DTNB
						
Galvanic isolation	4000 v		No		9XX: 2500 v ~ UXX: No	
Consumption	1,6 VA		1,2 W		9XX: 1,6W ~ UXX: 1,7W	
Frequency	50/60 Hz		-		-	
Operating margins	± 15%		± 10%		-	
Positive	-		Terminal 2	Terminal A1	Terminal 2	Terminal A1
Protected polarity	-		Yes		Yes	

Constructive and anviromental data

	PTNA / PTNB	DTNA / DTNB
Voltage phase-neutral	300 V	300 V
Overvoltage category	III	III
Rated impulse voltage	4 kV	4 kV
Pollution degree	2	3
Protection	IP 20 B	IP 20
Approximate weight	250 g	280 g
Storage temperature	-50ºC..+85ºC	-50ºC..+85ºC
Operating temperature	-20ºC..+50ºC	-20ºC..+50ºC
Humidity	30..85% HR	30..85% HR
Housing	Cycoloy - Light grey	Cycoloy - 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	Latón niquelado	-
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 sustances **2011/65/CEE** de 8/06/2011 Pb, Hg, Cd, Cr+6, PBB, PBDE. Plastics: **UL 91 V0**.	

Dimensions

PTNA / PTNB	DTNA / DTNB
	

DISIBEINT ELECTRONIC SL
Segle XX, 91
E08032-Barcelona
T: +34 934 330 370
F: +34 934 354 532
www.disibeint.com
disibeint@disibeint.com