

THE HOME OF INNOVATION.

Eltako







MULTIFUNCTION TIME SWITCHES, TIME SWITCHES AND TIMERS

SELECTION TABLE MULTIFUNCTION TIME SWITCHES AND RELAYS, TIME SWITCHES AND TIMERS

THE SUCCESSFUL

Multifunction time relays with up to 18 functions combined with universal control voltage 8 to 230 V UC – a competitive advantage, particularly the digital settable time switches MFZ12DDX.

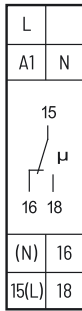
NP multifunction time relays always switch at zero passage, the DX devices only when connected to N.

Page	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	pictograms	MFZ12DX-230V	MFZ12DX-UC	MFZ12DBT-UC	MFZ12DDX-UC	MFZ12NP-230V+UC	MFZ12PMD-UC	MFZ61DX-UC	AZ12-UC	AVZ12DX-UC	EAW12DX-UC	PTN12-230V	RVZ12DX-UC	TG12DX-UC	SU12DBT/1+1-UC	S2U12DBT-UC	SU62PF-BT/UC	ASSU-BT/230V	S2U12DDX-UC
Modular device for mounting on DIN rail EN 60715 TH35, number of modules 18 mm each	1	1	1	1	1	1		1	1	1	1	1	1	1	2			1	
Built-in device for installation (e.g. flush-mounting box)							■										■		
Digital settable			■	■		■									■	■		■	
Analogue settable	■	■			■		■	■	■	■	■	■	■						
Settable with app																	■		
Number of NO contacts (not potential free)					(1)	(1)	1	1+1						1+1		1		1+1	
Number of CO contacts potential free	1	1	1	1					1	1	(1)	1	1		1+1		1		
Zero passage switching	 ■ ³⁾	■ ³⁾	■ ³⁾	■ ³⁾	■	■	■ ³⁾		■ ³⁾	■ ³⁾		■ ³⁾	■ ³⁾	■ ³⁾	■ ³⁾		■	■ ³⁾	
Switching capacity 16 A/250 V AC					■						■				■		■	■	
Switching capacity 10 A/250 V AC	■	■	■	■			■	■	■	■		■	■		■	■			
Incandescent lamp load W	2000	2000	2000	2000	2300	400 ¹⁾	2000	1000	2000	2000	2300	2000	2000	2000	2000	2000	2300	2000	
Bistable relay as relay contact	 ■ ²⁾	■ ²⁾	■ ²⁾	■ ²⁾			■ ²⁾	■ ²⁾	■ ²⁾	■ ²⁾		■ ²⁾	■ ²⁾	■ ²⁾	■ ²⁾	■ ²⁾	■ ²⁾	■ ²⁾	
Universal control voltage	 UC		■	■	■	■	■	■	■	■		■	■	■	■	■		■	
Low standby loss	 ■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Multifunction time relay	■	■	■	■	■	■	■												
Off delay RV	■	■	■	■	■	■	■				■	■							
Operate delay AV	■	■	■	■	■	■	■		■										
Additive operate delay AV+		■	■	■		■													
2-stage ON-delay								■											
Fleeting NO contact EW	■	■	■	■	■	■	■			■									
Fleeting NC contact AW	■	■	■	■	■	■	■			■									
Fleeting NO contact and fleeting NC contact EAW		■	■	■		■				■									
Operate and release delay ARV	■	■	■	■	■	■													
Additive operate and release delay ARV+		■	■	■		■													
Relay function ER		■	■	■		■													
Release-delay impulse switch SRV		■	■	■		■													
Impulse switch functions ES and ESV		■	■	■		■													
Clock generator starting with impulse TI	■	■	■	■	■	■	■						■						
Clock generator starting with pause TP	■	■	■	■	■	■													
Impulse controlled operate delay IA (e.g. automatic door opener)	■	■	■	■	■	■	■												
Pulse shaper IF		■	■	■		■													

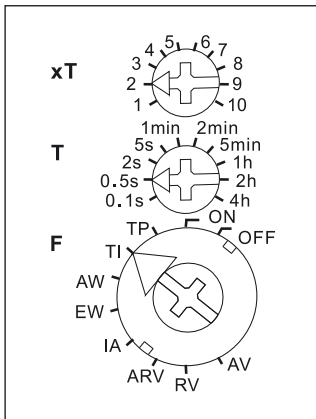
¹⁾ Up to 3400 W with capacity enhancers LUD12-230V. ²⁾ The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

³⁾ Duplex technology: When switched with 230 V/50 Hz zero passage switching is activated if L is connected to (L) and N to (N). Then additional standby loss of only 0.1 watt.

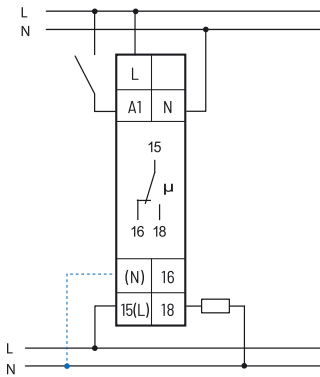
ANALOGUE SETTABLE MULTIFUNCTION TIME SWITCH MFZ12DX-230V WITH 10 FUNCTIONS



Function rotary switches



Typical connection



If (N) is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/MFZ12DX-230V>

Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

MFZ12DX-230V



1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*.
Standby loss 0.4 watt only.

Modular device for DIN-EN 60715 TH35 rail mounting. 1 module = 18 mm wide, 58 mm deep.

With the patented ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15(L) for this. This gives an additional standby consumption of only 0.1 Watt.

Supply and control voltage 230 V AC.

Time setting between 0.1 second and 40 hours.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

Functions F (description page 21)

- RV** = off delay
- AV** = operate delay
- TI** = clock generator starting with impulse
- TP** = clock generator starting with pause
- IA** = impulse controlled operate delay (e.g. automatic door opener)
- EW** = fleeting NO contact
- AW** = fleeting NC contact
- ARV** = operate and release delay
- ON** = permanent ON
- OFF** = permanent OFF

The LED below the big rotary switch indicates the contact position while time-out is in progress. It blinks while the relay contact 15-18 is open (15-16 closed), and is continuously ON as long as the relay contact 15-18 is closed (15-16 open).

The time base T is selected by means of the middle, latching rotary switch **T**. Time-base figures available are 0.1 seconds, 0.5 seconds, 2 seconds, 5 seconds, 1 minute, 2 minutes, 5 minutes, 1 hour, 2 hours and 4 hours. The total time is obtained by multiplying the timebase by the multiplier.

The multiplier xT is set on the upper, latching rotary switch **xT** and is in the range from 1 to 10. Thus, time settings can be selected in the range from 0.1 second (time base 0.1 second and multiplier 1) and 40 hours (time base 4 hours and multiplier 10).

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes.

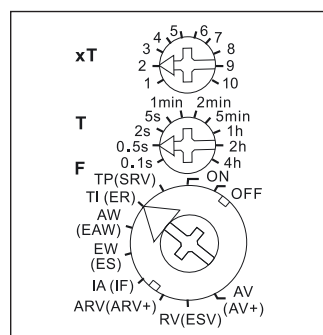
The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

MFZ12DX-230V	Analogue settable multifunction time switch 1 CO contact 10 A	Art.-Nr. 23001007	43,33 €/pc.
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ANALOGUE SETTABLE MULTIFUNCTION TIME SWITCH MFZ12DX-UC WITH 18 FUNCTIONS

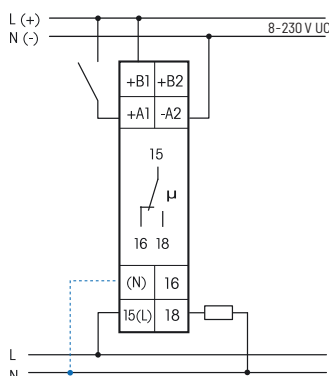


Function rotary switches



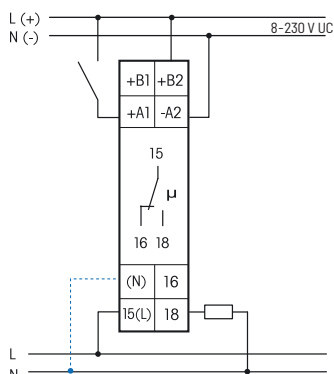
Typical connection

Level of setting 1, Functions F



Typical connection

Level of setting 2, Functions (F)



If N is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/MFZ12DX-UC>

Technical data page 22.

Housing for operating instructions

GBA14 page 1-48 chapter 1, main catalogue.

MFZ12DX-UC



1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*.
Standby loss 0.02-0.6 watt only.

Modular device for DIN-EN 60715 TH35 rail mounting. 1 module = 18 mm wide, 58 mm deep.

With the patented ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15(L) for this. This gives an additional standby consumption of only 0.1 Watt.

Universal control voltage from 12 to 230 V UC. Supply voltage same as control voltage.

Time setting between 0.1 second and 40 hours.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

According to the connection of the power supply to the terminals B1-A2 or B2-A2 **two different levels of settings** can be selected:

Functions F with connection of the power supply to B1-A2 (description page 21)

(Standby loss 0.02-0.4 W)

- RV** = off delay
- AV** = operate delay
- TI** = clock generator starting with impulse
- TP** = clock generator starting with pause
- IA** = impulse controlled operate delay (e.g. automatic door opener)
- EW** = fleeting NO contact
- AW** = fleeting NC contact
- ARV** = operate and release delay
- ON** = permanent ON
- OFF** = permanent OFF

Functions (F) with connection of the power supply to B2-A2 (description page 21)

(Standby loss 0.02-0.6 W)

- SRV** = release-delay impulse switch
- ER** = relay
- EAW** = fleeting NO contact and fleeting NC contact
- ES** = impulse switch
- IF** = pulse shaper
- ARV+** = additive operate and release delay
- ESV** = impulse switch with release delay and switch-off early-warning function
- AV+** = additive operate delay
- ON** = permanent ON
- OFF** = permanent OFF

The LED below the big rotary switch indicates the contact position while time-out is in progress. It blinks while the relay contact 15-18 is open (15-16 closed), and is continuously ON as long as the relay contact 15-18 is closed (15-16 open).

The time base T is selected by means of the middle, latching rotary switch **T**. Time-base figures available are 0.1 seconds, 0.5 seconds, 2 seconds, 5 seconds, 1 minute, 2 minutes, 5 minutes, 1 hour, 2 hours and 4 hours. The total time is obtained by multiplying the timebase by the multiplier.

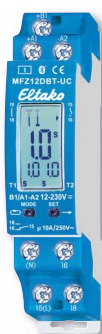
The multiplier xT is set on the upper, latching rotary switch **xT** and is in the range from 1 to 10. Thus, time settings can be selected in the range from 0.1 second (time base 0.1 second and multiplier 1) and 40 hours (time base 4 hours and multiplier 10).

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes.

The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

MFZ12DX-UC	Analogue settable multifunction time switch 1 CO contact 10 A	Art. No. 23001005	65,22 €/pc.
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DIGITAL SETTABLE MULTIFUNCTION TIME SWITCH WITH DISPLAY AND BLUETOOTH MFZ12DBT-UC WITH ELTAKO CONNECT-APP AND 18 FUNCTIONS



+B1	
+A1	-A2
(N)	16
15(L)	18

MFZ12DBT-UC



Digital settable multifunction time switch with display and Bluetooth with ELTAKO Connect-App and 18 functions. 1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W. With display lighting. Standby loss 0.1-0.3 watt only.

Modular device for DIN-EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

With the patented ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15 (L) for this. This gives an additional standby consumption of only 0.1 Watt.

Universal control voltage 12 to 230 V UC. Supply voltage same as the control voltage.

Both functions and times are entered at the touch of a key and indicated digitally on an LC display.

Only two keys are required for this purpose.

When setting the time all values can be entered within preset time ranges (0.1 to 9.9 or 1 to 99 seconds, minutes or hours). The longest possible setting is 99 hours. 600 settings are possible. The time setting is continuously displayed digitally.

Functions (description page 21)

RV = off delay

AV = operate delay

AV+ = operate delay additive

TI = clock generator starting with impulse

TP = clock generator starting with pause

IA = impulse controlled pickup delay
(e.g. automatic door opener)

IF = pulse shaper

EW = fleeting NO contact

AW = fleeting NC contact

EAW = fleeting NO contact and
fleeting NC contact

ARV = operate and release delay

ARV+ = operate and release delay additive

ES = impulse switch

SRV = release-delay impulse switch

ESV = impulse switch with release delay
and switch-off early-warning
function

ER = relay

ON = permanent ON

OFF = permanent OFF

With TI, TP, IA, EAW, ARV and ARV+ functions, a different second time can be entered also with different time ranges.

The time switch is set either via Bluetooth with the app or with the MODE and SET buttons, a button lock is possible.

The display lighting is switched on by pressing MODE or SET for the first time.

20 seconds after you last press MODE or SET, the program returns automatically to normal display and the display illumination goes off.

Connect the timer to the app:

Press SET, the display shows **BLE** (Bluetooth) and the ID of the timer. The connection to the app can now be established (delivery state **PIN 123123**).

Scan the QR code on the operating instructions, the app guides you through the learning process. After the connection to the app has been established, **BLE+** appears in the display. The MODE and SET buttons are now locked. After 20 minutes without interacting with the timer, the connection is automatically disconnected.

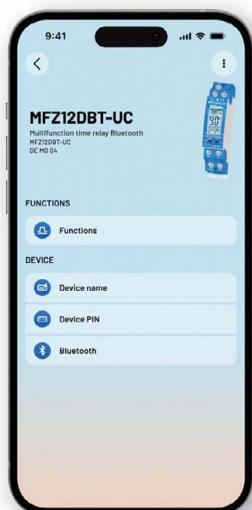
Change PIN: The PIN for the Bluetooth connection can be changed in the app under the **Device PIN** entry.

Bluetooth reset (delete any changed PIN): The connection to the app must be disconnected. Press MODE and SET simultaneously for 2 seconds, **RES** flashes in the display. Now press SET for 2 seconds, **BLE** appears in the display. If you confirm with SET, the BLE reset is carried out, the PIN is deleted and the delivery status is restored.

Set the time switch with the MODE and SET buttons:

Pressing the MODE button selects the LCD element to be changed. The element currently being accessed flashes. Pressing the SET button changes the element being accessed. This can be the function, time frame, time T1 or time T2 (TI, TP, IA, EAW, ARV and ARV+ only). Each entry is terminated with the MODE key. After setting the time with MODE, no element flashes anymore - the time switch is ready for operation.

Security in the event of a power failure: The parameters set are saved in an EEPROM and are therefore immediately available again after a power failure.



ELTAKO Connect-App

<https://eltako.com/redirect/eltako-connect>

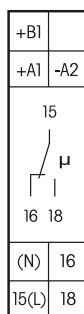


Manuals and documents in further languages:
<https://eltako.com/redirect/MFZ12DBT-UC>

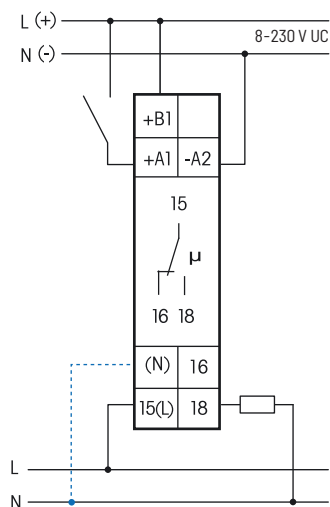
Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

MFZ12DBT-UC	Digital settable multifunction time switch with display and Bluetooth, 1 CO contact 10 A	Art. No. 23001003	83,33 €/pc.
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DIGITAL SETTABLE MULTIFUNCTION TIME SWITCH MFZ12DDX-UC WITH 18 FUNCTIONS



Typical connection



If N is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/MFZ12DDX-UC>

MFZ12DDX-UC



1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*. Standby loss 0.05–0.5 watt only.

Modular device for DIN-EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

With the patented ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15(L) for this. This gives an additional standby consumption of only 0.1 Watt.

Universal control voltage 12 to 230 V UC. Supply voltage same as the control voltage.

Both functions and times are entered at the touch of a key and indicated digitally on an LC display.

Only two keys are required for this purpose.

When setting the time all values can be entered within preset time ranges (0.1 to 9.9 or 1 to 99 seconds, minutes or hours). The longest possible setting is 99 hours. 600 settings are possible. The time setting is continuously displayed digitally.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

Functions (description page 21)

RV = off delay

AV = operate delay

AV+ = operate delay additive

TI = clock generator starting with impulse

TP = clock generator starting with pause

IA = impulse controlled pickup delay (e.g. automatic door opener)

IF = pulse shaper

EW = fleeting NO contact

AW = fleeting NC contact

ARV = operate and release delay

ARV+ = operate and release delay additive

ES = impulse switch

SRV = release-delay impulse switch

ESV = impulse switch with release delay and switch-off early-warning function

ER = relay

ON = permanent ON

OFF = permanent OFF

With TI, TP, IA, EAW, ARV and ARV+ functions, a different second time can be entered also with different time ranges.

Setting the times and functions: The LCD component to be changed is selected by pressing the MODE key. The component accessed flashes. Press the SET key to change the component accessed. This may be the function, the time ranges, time T1 or time T2 (on TI, TP, IA, EAW, ARV and ARV+ only). Pressing the MODE key terminates each input. Once the time has been set with MODE, no more components are flashing. The timing switch is now ready to operate. Press the MODE key again to restart the input cycle. All the entered parameters are retained if they are not changed using SET. 25 sec. after the last operation and if the component still flashes the input cycle is automatically terminated and the previously made changes lapse.

Functions of the LC display: If the ON or OFF function was selected, no time is displayed, only ON and OFF and a contact symbol in the correct position. On all other functions, the set time, the function code and the contact symbol are shown in the correct position (open or closed). The clock symbol flashes while the set time is elapsing and the remaining time is shown.

Safety in the event of a power failure: The set parameters are stored in an EEPROM and are therefore immediately available again when the power supply is restored after a power failure.

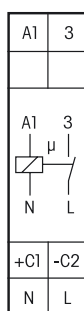
* The maximum load can be used starting at a delay time or clock cycle of 5 minutes.

The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

MFZ12DDX-UC	Digital settable multifunction time switch, 1 CO contact 10 A	Art. No. 23001004	65,22 €/pc.
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ANALOGUE SETTABLE MULTIFUNCTION TIME SWITCH MFZ12NP-230V+UC WITH 10 FUNCTIONS



MFZ12NP-230V+UC



1 NO contact not potential free 16 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2300 W*.
Standby loss 0.5 watt only.

Modular device for DIN EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

Zero passage switching to protect contacts and lamps.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

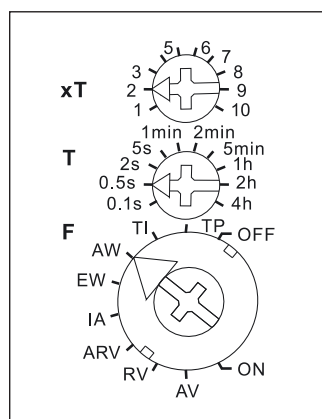
230 V control voltage and additionally 8 to 230 V UC electrically isolated universal control voltage.

230 V supply voltage and switching voltage.

Very low switching noise.

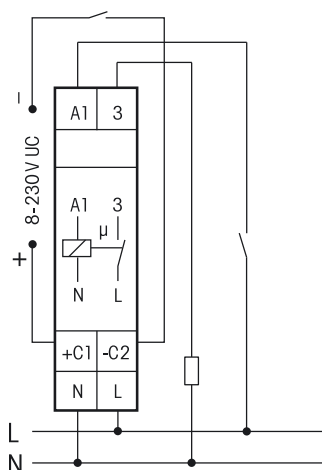
Time settings between 0.1 seconds and 40 hours.

Function rotary switches



Standard setting ex works.

Typical connection



Manuals and documents in further languages:
https://eltako.com/redirect/MFZ12NP-230V*UC

Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

Functions F (description page 21)

- RV** = release delay
- AV** = operate delay
- TI** = clock generator starting with impulse
- TP** = clock generator starting with pause
- IA** = impulse-controlled operate delay
- EW** = fleeting NO contact
- AW** = fleeting NC contact
- ARV** = operate and release delay
- ON** = permanent ON
- OFF** = permanent OFF

The LED below the upper function rotary switch informs about the position of the contact during the countdown. It blinks while the contact is open and stays on as long as the contact is closed.

The time base T is selected by means of the middle, latching rotary switch **T**. Time-base figures available are 0.1 second, 0.5 seconds, 2 seconds, 5 seconds, 1 minute, 2 minutes, 5 minutes, 1 hour, 2 hours and 4 hours. The total time is obtained by multiplying the time base by the multiplier.

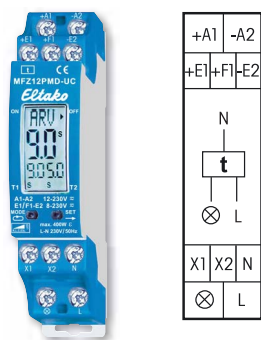
The multiplier xT is set on the upper, latching rotary switch **xT** and is in the range from 1 to 10. Thus, time settings can be selected in the range from 0.1 second (time base 0.1 second and multiplier 1) and 40 hours (time base 4 hours and multiplier 10).

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes.

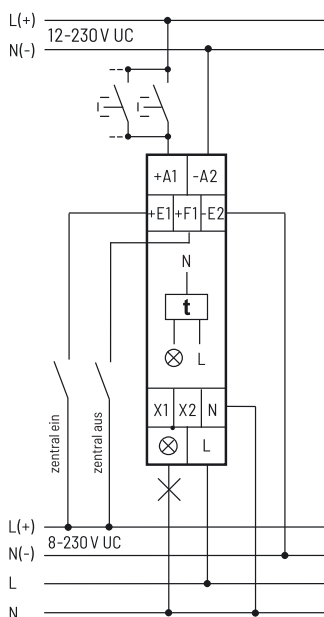
The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

MFZ12NP-230V+UC	Analogue settable multifunction time switch, 1 NO contact 16 A	Art. No. 23100001	62,50 €/pc.
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FULLY ELECTRONIC MULTIFUNCTION TIME SWITCH MFZ12PMD-UC WITH 18 FUNCTIONS



Typical connection



Manuals and documents in further languages:
<https://eltako.com/redirect/MFZ12PMD-UC>

MFZ12PMD-UC



Power MOSFET with almost unlimited number of circuits up to 400 W. Automatic lamp detection. Standby loss 0.3 watt only. Dim down to minimum brightness and up to maximum brightness and Soft ON / Soft OFF are also adjustable for lamp circuit.

Modular device for DIN EN 60715 TH35 rail mounting. 1 module = 18 mm wide, 58 mm deep.

Digitally adjustable and fully electronic multifunction time switch for lamps up to 400 W dependent on ventilation conditions. Dimmable 230V LED lamps and dimmable energy saving lamps (ESL) are also dependent on the lamp electronics and the dimming technology, **see Technical data page 9-23.**

If **minimum brightness** is not set to 0, the circuit is not switched off but dimmed down to the set percentage.

Up to 3600 W with capacity enhancers LUD12-230V (description page 9-10) at the terminals X1 and X2.

Universal control voltage 12 to 230 V UC and additionally the universal voltage control inputs 8 to 230 V UC central ON and central OFF. The control inputs are electrically isolated from the supply voltage and switching voltage.

Zero passage switching to protect lamps.

Glow lamp current up to 5 mA starting at 110 V.

Automatic electronic overload protection and overtemperature switch-off.

Enter both the functions and the times using the two buttons MODE and SET. The functions and times are indicated digitally on an LC display. The time can be set by entering all values within the preselected time scale (0.1 to 9.9 or 1 to 99 seconds, minutes or hours). The longest time is 99 hours. This permits 600 time settings. The time(s) entered is (are) permanently displayed digitally.

Settable functions (description page 13-21): **RV** = release delay, **AV** = operate delay, **AV+** = additive operate delay, **TI** = clock generator starting with impulse, **TP** = clock generator starting with pause, **IA** = impulse-controlled operate delay, **IF** = pulse shaper, **EW** = fleeting NO contact, **AW** = fleeting NC contact, **EAW** = fleeting NO contact and fleeting NC contact, **ARV** = operate and release delay, **ARV+** = additive operate and release delay, **ES** = impulse switch, **SRV** = release-delay impulse switch, **ESV** = impulse switch with release delay and switch-off early-warning function, **ER** = relay, **ON** = permanent ON, **OFF** = permanent OFF. With TI, TP, IA, EAW, ARV and ARV+ functions, a different second time can be entered also with different time ranges.

Setting the times and functions: The LCD component to be changed is selected by pressing the MODE key. The component accessed flashes. Press the SET key to change the component accessed. This may be the function, the time ranges, time T1 or time T2 (on TI, TP, IA, EAW, ARV and ARV+ only). Pressing the MODE key terminates each input. Once the time has been set with MODE, no more components are flashing. The timing relay is now ready to operate. Press the MODE key again to restart the input cycle. All the entered parameters are retained if they are not changed using SET. 25 sec. after the last operation and if the component still flashes the input cycle is automatically terminated and the previously made changes lapse.

Setting additional parameters valid for all functions: when you press the MODE button for longer than 2 seconds, you access the submenu. Press the SET button to select the parameter you want to change. Then confirm by pressing MODE. Press SET to enter the parameter and confirm by pressing MODE. After the 'LED' submenu, you return automatically to the main menu.

MIN = Minimum brightness in OFF state settable to 0 and from 10 to 89 (%), factory setting = 0.

MAX = Maximal brightness in ON state settable from 10 to 99 (%), factory setting = 99. MAX must be at least 10 divisions above MIN.

RMP = Switch ON/OFF ramp (soft ON and soft ON) adjustable from 0 = 10 ms to 99 = 1 s, factory setting = 0.

LED = LED+ for dimmable 230 V LED lamps which cannot be dimmed down far enough in automatic mode (trailing edge control) for design reasons and must therefore be forced by phase control. Enabled by pressing MODE; factory setting = LED without +.

Functions of the LC display: if you selected the functions ON or OFF, no time is displayed. Instead an arrow indicates either ON or OFF. In all other functions the set time(s), the function abbreviation and an arrow next to ON and OFF display the switching position. The clock symbol flashes while the set time is elapsing and the remaining time is shown.

Safety in the event of a power failure: The set parameters are stored in an EEPROM and are therefore immediately available again when the power supply is restored after a power failure.

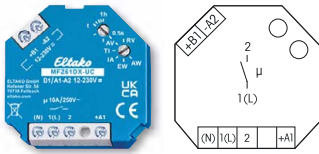
Technical data page 22.

Housing for operating instructions

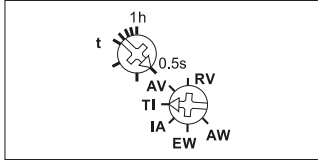
GBA14 page 1-48 chapter 1, main catalogue.

MFZ12PMD-UC	Fully electronic multifunction time switch, Power MOSFET up to 400 W	Art. No. 23001006	88,10 €/pc.
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ANALOGUE SETTABLE MULTIFUNCTION TIME SWITCH MFZ61DX-UC WITH 6 FUNCTIONS

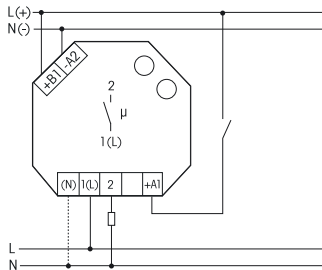


Function rotary switches



Standard setting ex factory.

Typical connection



If N is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/MFZ61DX-UC>

Technical data page 22.

MFZ61DX-UC



1 NO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*.
Standby loss 0.02–0.4 watt only.

Built-in device for installation.

45 mm long, 45 mm wide, 18 mm deep.

With the patented ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 1(L) for this. This gives an additional standby consumption of only 0.1 watt.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

Universal control voltage input 12 to 230 V UC. Supply voltage is same as the control voltage.

Time settings between 0.5 seconds and 1 hour.

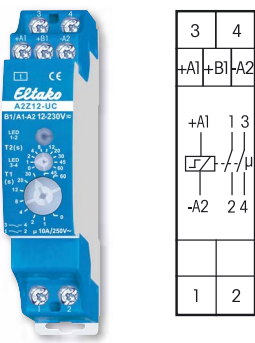
Functions F (description page 21)

- RV** = off delay
- AV** = operating delay
- TI** = clock generator starting with impulse
- IA** = impulse-controlled operating delay
- EW** = fleeting NO contact
- AW** = fleeting NC contact

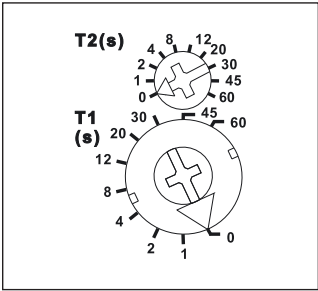
* The maximum load can be used from a delay time or clock cycle of 5 minutes.

The maximum load is reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

MFZ61DX-UC	Analogue settable multifunction time switch, 1 NO contact 10 A	Art. No. 61100604	59,50 €/pc.
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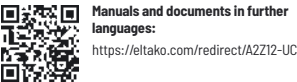
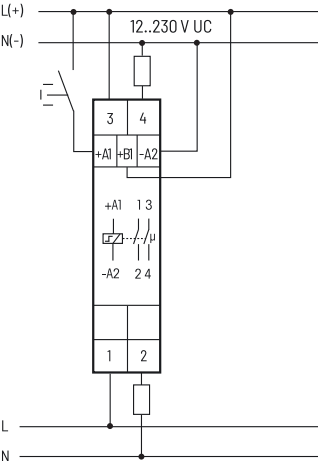


Function rotary switches



Standard setting ex factory.

Typical connection



Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

A2Z12-UC



2-stage ON-delay. 1+1 NO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 1000 W. Standby loss 0.4 watt only.

Modular device for DIN EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

Universal control voltage input 12 to 230 V UC. Supply voltage is same as the control voltage.

Contact position display with two LEDs. Very low switching noise.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

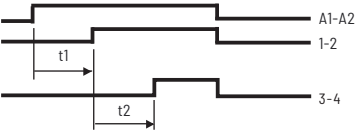
In case of a power failure the system is disconnected in a preset sequence.

When the control voltage is applied, the time lapse T1 starts between 0 and 60 seconds.

At the end of the time lapse, contact 1-2 closes and time lapse T2 starts between 0 and 60 seconds.

At the end of this time lapse, contact 3-4 closes. After an interval, the time lapse starts again at T1.

A2 = 2-stage ON-delay

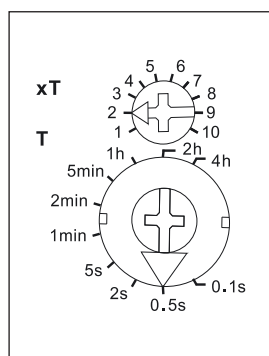


When the control voltage is applied, the time lapse T1 starts between 0 and 60 seconds. At the end of the time lapse, contact 1-2 closes and time lapse T2 starts between 0 and 60 seconds. At the end of this time lapse, contact 3-4 closes. After an interval, the time lapse starts again at T1.

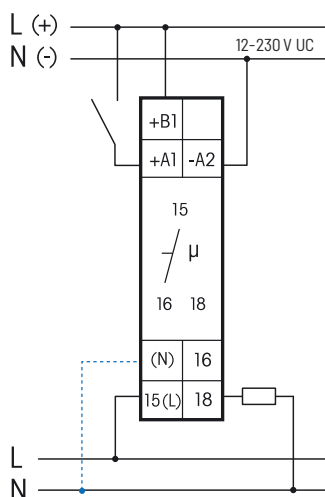
A2Z12-UC	Analogue settable 2-stage ON-delay, 1+1 NO contact 10 A	Art. No. 23200302	79,80 €/pc.
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Function rotary switches



Typical connection



If N is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/AVZ12DX-UC>

Technical data page 22.
 Housing for operating instructions
 GBA14 page 1-48 chapter 1, main catalogue.

AVZ12DX-UC



Operate delay, 1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*. Standby loss 0.02-0.4 watt only.

Modular devices for DIN-EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

With the ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15 (L) for this. This gives an additional standby consumption of only 0.1 Watt.

Universal control voltage 12 to 230 V UC. Supply voltage same as the control voltage.

Time setting between 0.1 seconds and 40 hours.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

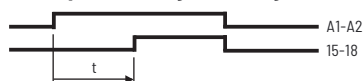
The LED below the big rotary switch indicates the contact position while time-out is in progress. It blinks while the relay contact 15-18 is open (15-16 closed), and is continuously ON as long as the relay contact 15-18 is closed (15-16 open).

The time base T is selected by means of the middle, latching rotary switch T. Time-base figures available are 0.1 seconds, 0.5 seconds, 2 seconds, 5 seconds, 1 minute, 2 minutes, 5 minutes, 1 hour, 2 hours and 4 hours. The total time is obtained by multiplying the timebase by the multiplier.

The multiplier xT is set on the upper, latching rotary switch xT and is in the range from 1 to 10. Thus, time settings can be selected in the range from 0.1 seconds (time base 0.1 seconds and multiplier 1) and 40 hours (time base 4 hours and multiplier 10).

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes. The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

AV = Operate delay (ON delay)

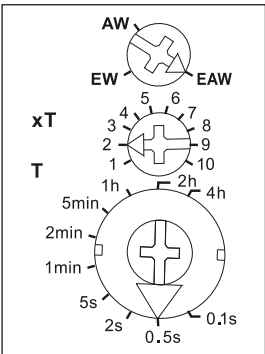


When the control voltage is applied the timing period is started; on time-out the relay contact changes to 15-18. After an interruption, the timing period is restarted.

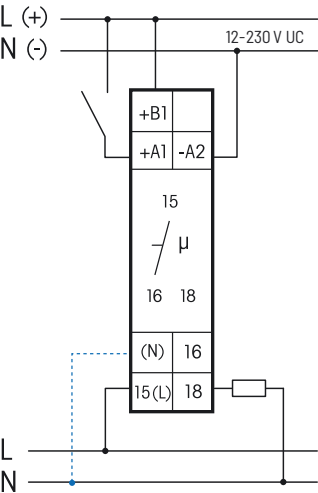
AVZ12DX-UC	Analogue settable time switch with operate delay, 1 CO contact 10 A	Art. No. 23001302	68,00 €/pc.
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Function rotary switches



Typical connection



If N is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/EAW12DX-UC>

Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

EAW12DX-UC



Fleeting NO contact and fleeting NC contact, 1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*. Standby loss 0.02-0.4 watt only.

Modular devices for DIN-EN 60715 TH35 rail mounting. 1 module = 18 mm wide, 58 mm deep. Different functions can be selected by a rotary switch: fleeting NO contact (EW), fleeting NC contact (AW) or fleeting NO contact and fleeting NC contact (EAW).

With the ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15 (L) for this. This gives an additional standby consumption of only 0.1 Watt.

Universal control voltage 12 to 230 V UC. Supply voltage same as the control voltage. Time setting between 0.1 seconds and 40 hours.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

The LED below the big rotary switch indicates the contact position while time-out is in progress. It is OFF while the relay contact 15-18 is open (15-16 closed), and is continuously ON as long as the relay contact 15-18 is closed (15-16 open).

The time base T is selected by means of the middle, latching rotary switch T. Time-base figures available are 0.1 seconds, 0.5 seconds, 2 seconds, 5 seconds, 1 minute, 2 minutes, 5 minutes, 1 hour, 2 hours and 4 hours. The total time is obtained by multiplying the timebase by the multiplier.

The multiplier xT is set on the upper, latching rotary switch xT and is in the range from 1 to 10. Thus, time settings can be selected in the range from 0.1 seconds (time base 0.1 seconds and multiplier 1) and 40 hours (time base 4 hours and multiplier 10).

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes. The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

EW = Fleeting NO contact



When the control voltage is applied the NO contact changes to 15-18 and reverts on wiping time-out. If the control voltage is removed during the wiping time the NO contact immediately reverts to 15-16 and the residual time is cancelled.

AW = Fleeting NC contact



When the control voltage is interrupted the NO contact changes to 15-18, and reverts on wiping time-out. If the control voltage is applied during the wiping time the NO contact immediately reverts to 15-16 and the residual time is cancelled.

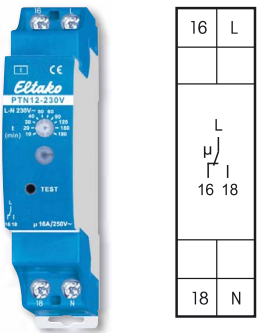
EAW = Fleeting NO contact and fleeting NC contact



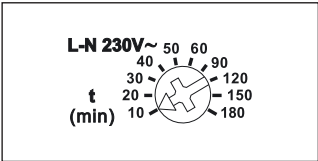
When the control voltage is applied or interrupted the relay contact changes to 15-18 and reverts after the set wiping time.

EAW12DX-UC	Analogue settable time switch with fleeting NO contact and fleeting NC contact, 1 CO contact 10 A	Art. No. 23001702	67,60 €/pc.
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TEST PUSHBUTTON FOR EMERGENCY LIGHTING SYSTEMS WITH OFF-DELAY PTN12-230V



Function rotary switch



Standard setting ex works.



Manuals and documents in further languages:
<https://eltako.com/redirect/PTN12-230V>

Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

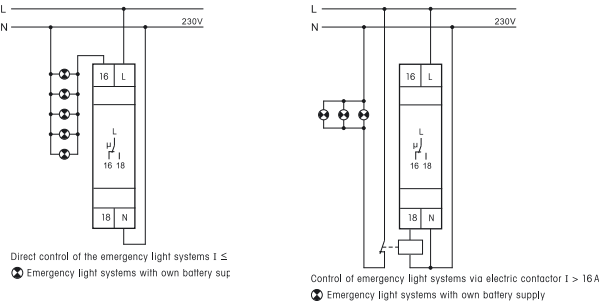
PTN12-230V



Test pushbutton for emergency lighting systems with its own battery supply. 1 CO contact 16 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2300 W. Off-delay settable between 10 and 180 minutes. Only 0.5 watt standby loss.

Modular device for DIN-EN 60715 TH35 rail mounting. 1 module = 18 mm wide, 58 mm deep.
Supply voltage 230 V, 50/60 Hz.
Off-delay 10, 20, 30, 40, 50, 60, 90, 120, 150 and 180 minutes settable with rotary switch.
When the supply voltage is applied, the green LED lights up.
For further informations see the operating instructions.

Typical connections

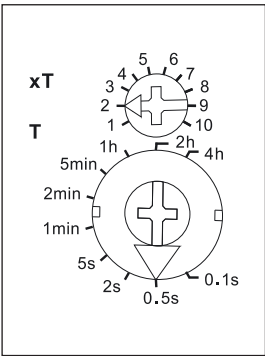


PTN12-230V	Test pushbutton for emergency lighting systems with off-delay, 1 CO contact 16 A	Art. No. 23001802	64,50 €/pc.
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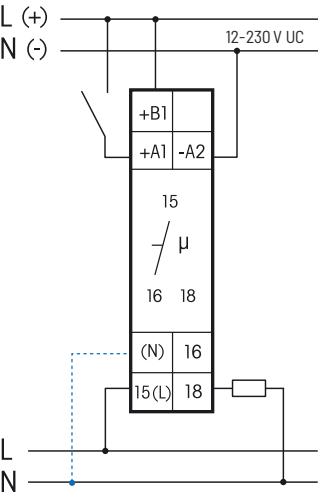
ANALOGUE SETTABLE TIME SWITCH WITH RELEASE DELAY RVZ12DX-UC



Function rotary switches



Typical connection



If N is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/RVZ12DX-UC>

Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

RVZ12DX-UC



Release delay, 1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*. Standby loss 0.02-0.4 watt only.

Modular devices for DIN-EN 60715 TH35 rail mounting.
1 module = 18 mm wide, 58 mm deep.

With the ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15(L) for this. This gives an additional standby consumption of only 0.1 Watt.

Universal control voltage 12 to 230 V UC. Supply voltage same as the control voltage.
Time setting between 0.1 seconds and 40 hours.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

The LED below the big rotary switch indicates the contact position while time-out is in progress. It is OFF while the relay contact 15-18 is open (15-16 closed), and is continuously ON as long as the relay contact 15-18 is closed (15-16 open).

The time base T is selected by means of the middle, latching rotary switch T. Time-base figures available are 0.1 seconds, 0.5 seconds, 2 seconds, 5 seconds, 1 minute, 2 minutes, 5 minutes, 1 hour, 2 hours and 4 hours. The total time is obtained by multiplying the timebase by the multiplier.

The multiplier xT is set on the upper, latching rotary switch xT and is in the range from 1 to 10. Thus, time settings can be selected in the range from 0.1 seconds (time base 0.1 seconds and multiplier 1) and 40 hours (time base 4 hours and multiplier 10).

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes. The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

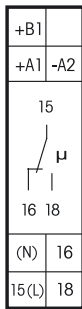
RV = Release delay (OFF delay)



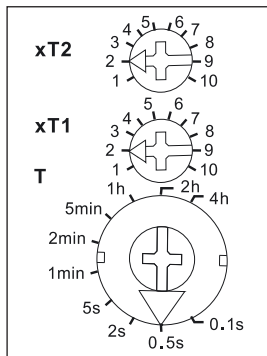
When the control voltage is applied the relay contact switches to 15-18. When the control voltage is interrupted the timing period is started; on time-out the relay contact returns to normal position. Resettable during the timing period.

RVZ12DX-UC	Analogue settable time switch with release delay, 1 CO contact 10 A	Art. No. 23001202	67,50 €/pc.
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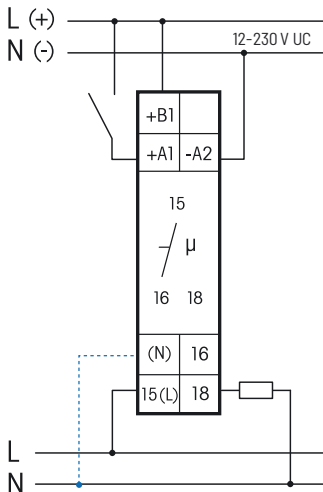
ANALOGUE SETTABLE TIME RELAY WITH CLOCK GENERATOR STARTING WITH IMPULSE TGI12DX-UC



Function rotary switches



Typical connection



If N is connected, the zero passage switching is active.



Manuals and documents in further languages:
<https://eltako.com/redirect/TGI12DX-UC>

Technical data page 22.
Housing for operating instructions
GBA14 page 1-48 chapter 1, main catalogue.

TGI12DX-UC



Clock generator starting with impulse, 1 CO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, incandescent lamps 2000 W*. Standby loss 0.02-0.4 watt only.

Modular devices for DIN-EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

T1 and T2 can be set separately by a second multiplier while the time base remains the same.

With the ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 15(L) for this. This gives an additional standby consumption of only 0.1 Watt.

Universal control voltage 12 to 230 V UC. Supply voltage same as the control voltage.

Time setting between 0.1 seconds and 40 hours.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

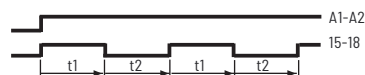
The LED below the big rotary switch indicates the contact position while time-out is in progress. It blinks while the relay contact 15-18 is open (15-16 closed), and is continuously ON as long as the relay contact 15-18 is closed (15-16 open).

The time base T is selected by means of the middle, latching rotary switch T. Time-base figures available are 0.1 seconds, 0.5 seconds, 2 seconds, 5 seconds, 1 minute, 2 minutes, 5 minutes, 1 hour, 2 hours and 4 hours. The total time is obtained by multiplying the timebase by the multiplier.

The multiplier xT is set on the upper, latching rotary switch xT and is in the range from 1 to 10. Thus, time settings can be selected in the range from 0.1 seconds (time base 0.1 seconds and multiplier 1) and 40 hours (time base 4 hours and multiplier 10).

* The maximum load can be used starting at a delay time or clock cycle of 5 minutes. The maximum load will be reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%.

TI = Clock generator starting with impulse (flasher relay)



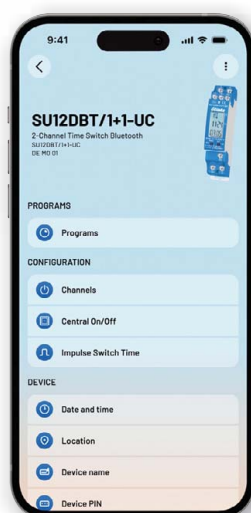
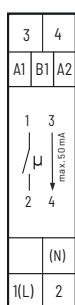
As long as the control voltage is applied the relay contact opens and closes.

Both times can be set separately (identical time base, but additional multiplier).

When the control voltage is applied the relay contact immediately changes to 15-18.

TGI12DX-UC	Analogue settable time relay with clock generator, 1 CO contact 10 A	Art. No. 23001402	67,60 €/pc.
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2-CHANNEL TIMER WITH DISPLAY AND BLUETOOTH SU12DBT/1+1-UC WITH APP ELTAKO-CONNECT



ELTAKO Connect-App

<https://eltako.com/redirect/eltako-connect>



Manuals and documents in further languages:

https://eltako.com/redirect/SU12DBT*1+1-UC

Technical data page 22.

Housing for operating instructions

GBA14 page 1-48 chapter 1, main catalogue.

SU12DBT/1+1-UC



2-channel timer with display, Bluetooth and ELTAKO Connect-App. Channel 1 with 1 potential-free NO contact 16 A/250 V AC and DX. Channel 2 with 1 potential-free OptoMOS semiconductor output 50 mA/12..230 V UC e.g. to control an electronic relay (ER) or a group impulse switch (EGS). With display lighting and astro function. Standby loss only 0.1-0.3 watts. Supply and control voltage for central control 12 to 230 V UC.

Modular device for DIN-EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

With the patented ELTAKO duplex technology (DX), the normally potential-free contact 1 can still switch at zero crossing when switching 230 V/50 Hz AC voltage and thus drastically reduce wear. To achieve this, simply connect the N conductor to the terminal (N) and L to 1(L). This results in an additional standby consumption of only 0.1 watt.

Up to 60 timer memory locations are freely assigned to the channels. With date and automatic summer/winter time changeover. Ca. 7 days power reserve without battery.

Each memory location can be assigned with the astro function (automatic switching after sunrise or sundown), the switch on/off time or a pulsed switching time (which triggers an impulse of 2 seconds). The astro switch on/off time can be changed up to ± 2 hours. A time lag of up to ± 2 hours influenced by the solstices can be entered additionally. With control input (+A1) for central control ON or OFF with priority.

The timer is set either via Bluetooth with the app or with the MODE and SET buttons, a button lock is possible.

The display lighting is switched on by pressing MODE or SET for the first time.

20 seconds after you last press MODE or SET, the program returns automatically to normal display and the display illumination goes off.

Connect the timer to the app:

Press SET, the display shows **BLE** (Bluetooth) and the ID of the timer. The connection to the app can now be established (delivery state **PIN 123123**).

Scan the QR code on the operating instructions, the app guides you through the learning process. After the connection to the app has been established, **BLE+** appears in the display. The MODE and SET buttons are now locked. After 20 minutes without interacting with the timer, the connection is automatically disconnected.

Change PIN: The PIN for the Bluetooth connection can be changed in the app under the **Device PIN** entry.

Bluetooth reset (delete any changed PIN): The connection to the app must be disconnected. Press MODE and SET simultaneously for 2 seconds, RES flashes in the display. Now press SET for 2 seconds, BLE appears in the display. If you confirm with SET, the **BLE** reset is carried out, the PIN is deleted and the delivery status is restored.

Set the timer with the MODE and SET buttons:

Set language: Every time the power supply is applied, press SET within 10 seconds to set the language and press MODE to confirm. D = German, GB = English, F = French, IT = Italian and ES = Spanish. The normal display then appears: weekday, time, day and month.

Rapid scroll: In the following settings, the numerals scroll rapidly when you press and hold down Enter. Release then press and hold down to change the scroll direction.

Set clock: Press MODE then at PRG (program) press SET to search for the **CLK function**. Press MODE to set. In H, press SET to select the hour and press MODE to confirm. In M proceed in the same way to set the minute.

Set date: Press MODE then at PRG press SET to search for the **DAT function**. Press MODE to select. At Y, press SET to select the year and press MODE to confirm. Proceed in the same way at M to set the month and at D to set the day. The last setting in the sequence is MO (weekday) blinking. Press SET to set it and press MODE to confirm.

Further settings like **geographic position for astro function, manual switching ON or OFF, summer/winter time changeover, central control ON or OFF, random mode, keylock and entering of timer programs** are described in the operating instructions.

SU12DBT/1+1-UC	2-channel timer with display and Bluetooth	Art. No. 23200902	86,67 €/pc.
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2-CHANNEL TIMER WITH DISPLAY AND BLUETOOTH S2U12DBT-UC WITH APP ELTAKO-CONNECT



+B1	-A2	4(L)	6
		5	(N)
+E1	+F1	-E2	(N)
		1(L)	3

S2U12DBT-UC



2-channel timer with display, Bluetooth and ELTAKO Connect-App. 1+1 CO contact potential free 10 A/250 V AC, with DX technology. With display lighting and astro function. Standby loss only 0.1-0.3 watts. Supply voltage 12..230 V UC. Central ON and central OFF control inputs for 8..230 V UC, galvanically isolated from the supply voltage and switching voltage.

Modular device for DIN-EN 60715 TH35 rail mounting. 2 modules = 36 mm wide, 58 mm deep.

With the patented ELTAKO Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 1(L) and/or 4(L) for this. This results in an additional standby consumption of only 0.1 watt.

Up to 60 timer memory locations are freely assigned to the channels. With date and automatic summer/winter time changeover. Ca. 7 days power reserve without battery. Each memory location can be assigned with the astro function (automatic switching after sunrise or sundown), the switch on/off time or a pulsed switching time (which triggers an impulse of 2 seconds). The astro switch on/off time can be changed up to ± 2 hours. A time lag of up to ± 2 hours influenced by the solstices can be entered additionally. Central control ON (terminals +E1/-E2) or OFF (terminals +F1/-E2) with priority in ZEA operation (automatic with central control).

The timer is set either via Bluetooth with the app or with the MODE and SET buttons, a button lock is possible.

The display lighting is switched on by pressing MODE or SET for the first time.

20 seconds after you last press MODE or SET, the program returns automatically to normal display and the display illumination goes off.

Connect the timer to the app:

Press SET, the display shows **BLE** (Bluetooth) and the ID of the timer. The connection to the app can now be established (delivery state **PIN 123123**).

Scan the QR code on the operating instructions, the app guides you through the learning process. After the connection to the app has been established, **BLE+** appears in the display. The MODE and SET buttons are now locked. After 20 minutes without interacting with the timer, the connection is automatically disconnected.

Change PIN: The PIN for the Bluetooth connection can be changed in the app under the **Device PIN** entry.

Bluetooth reset (delete any changed PIN): The connection to the app must be disconnected. Press MODE and SET simultaneously for 2 seconds, RES flashes in the display. Now press SET for 2 seconds, BLE appears in the display. If you confirm with SET, the **BLE** reset is carried out, the PIN is deleted and the delivery status is restored.

Set the timer with the MODE and SET buttons:

Set language: Every time the power supply is applied, press SET within 10 seconds to set the language and press MODE to confirm. D = German, GB = English, F = French, IT = Italian and ES = Spanish. The normal display then appears: weekday, time, day and month.

Rapid scroll: In the following settings, the numerals scroll rapidly when you press and hold down Enter. Release then press and hold down to change the scroll direction.

Set clock: Press MODE then at PRG (program) press SET to search for the **CLK function**. Press MODE to set. In H, press SET to select the hour and press MODE to confirm. In M proceed in the same way to set the minute.

Set date: Press MODE then at PRG press SET to search for the **DAT function**. Press MODE to select. At Y, press SET to select the year and press MODE to confirm. Proceed in the same way at M to set the month and at D to set the day. The last setting in the sequence is MO (weekday) blinking. Press SET to set it and press MODE to confirm.

Further settings like **geographic position for astro function, manual switching ON or OFF, summer/winter time changeover, central control ON or OFF, random mode, keylock and entering of timer programs** are described in the operating instructions.



ELTAKO Connect-App

<https://eltako.com/redirect/eltako-connect>



Manuals and documents in further languages:
<https://eltako.com/redirect/S2U12DBT-UC>

Technical data page 22.

Housing for operating instructions

GBA14 page 1-48 chapter 1, main catalogue.

S2U12DBT-UC	2-channel timer with display and Bluetooth	Art. No. 23002903	90,00 €/pc.
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1-CHANNEL TIMER WITH POTENTIAL-FREE CONTACT, BLUETOOTH SU62PF-BT/UC WITH APP ELTAKO-CONNECT



ELTAKO Connect-App
<https://eltako.com/redirect/eltako-connect>



Manuals and documents in further languages:
https://eltako.com/redirect/SU62PF-BT*UC

SU62PF-BT/UC



1-channel timer with potential-free contact, Bluetooth and ELTAKO Connect-App. 1 NO contact potential-free 10 A/250 V AC, 230 V LED lamps and ESL up to 200 W, incandescent lamps 2000 W. With 'astro' function. Only 0.3 watt standby loss.

For installation. 49x51mm, 20 mm deep.

The terminals are plug-in terminals for conductor cross-sections of 0.2 mm² to 2.5 mm².

Supply and control voltage 12-230 V UC.

Bistable relay, so there is no coil power loss and no heating even when switched on.

Up to 60 memory locations for programming switching times. With date and automatic summer/winter time changeover. Ca. 7 days power reserve without battery. When the power returns, the timer switches the programs on again.

Each memory location can be assigned either the astro function (automatic switching after sunrise or sunset) or the switch-on and switch-off times; one-time program execution can be configured. The **astro** switch on/off time can be changed up to ± 2 hours. A time lag of up to ± 2 hours influenced by the solstices can be entered additionally.

The timer is set via Bluetooth with the ELTAKO Connect-App. The QR-Code in the operating instructions links to download of the App, which allows to configure the device.

Pairing mode: Automatic for 3 minutes after the voltage is applied or manually using the local button (press for 5 seconds).

Briefly switching the load on and off signals that it is ready for pairing.

If the connection is not disconnected via the app, it will be automatically disconnected after 20 minutes without communication with the app. After the connection with the app has been disconnected, the timer is ready for pairing again for 3 minutes, but can be manually terminated using the local button (press for 5 seconds). **Switching the load on and off twice signals the end of the pairing readiness.**

Change PIN: The PIN for the Bluetooth connection can be changed in the app under the **Device PIN** entry.

Bluetooth reset (delete any changed PIN): Briefly tap the local button 8 times or switch the supply voltage on and off 8 times.

Setting the timer via the ELTAKO Connect-App:

Edit programs: Create, edit and activate/deactivate time and astro programs, as well as the option to run a program only once.

Channel configuration: Choose between the **AUTO**, **on** or **off** function. The timer only switches according to the **time** and **astro** programs when the **AUTO function** is activated.

Random mode: When random mode is switched on, all switching times are randomly shifted by up to 15 minutes. Switch-on times to earlier and switch-off times to later.

Summer/winter time changeover: Setting a time shift of up to ± 2 hours at the summer solstice and the winter solstice.

Date and time: Date, time, time zone and summer/winter time can be set manually or automatically determined and set by the app.

Location: The location can be entered manually or determined and set by the app.

Bluetooth: Selection between the following **Bluetooth pairing** readiness levels:

3min-On: After the voltage is applied, the timer is ready for pairing for 3 minutes.

Manual-On: The pairing readiness can only be activated for 3 minutes using the local button.

Permanent-On: Permanent pairing readiness. Bluetooth remains permanently active.

Factory settings: Choice between deleting all programs, resetting the Bluetooth settings and resetting to factory settings.

Factory settings: Choose between deleting all programs, resetting Bluetooth pairing settings and resetting to factory settings.

Technical data page 22.

SU62PF-BT/UC	1-channel timer with potential-free contact, Bluetooth and ELTAKO Connect-App	Art. No. 30062006	66,67 €/pc.
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OUTDOOR SOCKET TIMER WITH BLUETOOTH ASSU-BT/230V WITH APP ELTAKO-CONNECT



ELTAKO Connect-App

<https://eltako.com/redirect/eltako-connect>



Manuals and documents in further languages:
https://eltako.com/redirect/ASSU-BT_230V

Technical data page 22.

ASSU-BT/230V



1-channel timer with Bluetooth and ELTAKO Connect-App. 1 NO contact not potential free 16 A/250 V AC, 230 V LED lamps and ESL up to 400 W, incandescent lamps 2300 W. 116x56x46 mm (measurements without plug), black. Suitable for both indoors and outdoors, IP44 (splash-proof). With 'astro' function. Only 0.3 watt standby loss.

German socket (Type F), with increased shock protection.

Supply and switching voltage 230 V.

Zero passage switching.

Bistable relay to prevent coil power loss and the associated heat generation in switched state.

Up to 60 timer memory locations are freely assigned to the channels. With date and automatic summer/winter time changeover. Ca. 7 days power reserve without battery.

Each memory location can be assigned with the astro function (automatic switching after sunrise or sundown) or the switch on/off time. The astro switch on/off time can be changed up to ± 2 hours.

A time lag of up to ± 2 hours influenced by the solstices can be entered additionally.

The timer is set via Bluetooth with the app.

Connect the timer to the app:

Press the button on the front for 5 seconds, the blue LED flashes. The connection to the app can now be established (delivery state **PIN 123123**). The flashing of the blue LED signals readiness for coupling, this ends automatically after 3 minutes, but can be ended manually by pressing a button > 5 seconds. Scan the QR code on the operating instructions, the app guides you through the teaching-in process. After the connection to the app has been established, the blue LED lights up continuously. If the connection is not disconnected via the app, it will be automatically disconnected after 20 minutes of no interaction with the app. After separating the connection via the app, the timer again signals its readiness for coupling and the blue LED flashes.

Change PIN: The PIN for the Bluetooth connection can be changed in the app under the **Device PIN** entry.

Bluetooth reset (delete any changed PIN): Briefly tap the button on the front 8 times or unplug and plug in the adapter plug 8 times within 40 seconds. The blue LED flashes.

Setting the timer via the ELTAKO Connect-App:

Edit programs: creation, editing and activation/deactivation of time and astro programs.

Channel configuration: choose between AUTO, On or Off function. Random mode: when random mode is switched on, all switching times of all channels are randomly shifted by up to 15 minutes. Switch-on times to earlier and switch-off times to later.

Time shift solstice: setting a time shift of up to ± 2 hours at the summer solstice and at the winter solstice.

Date and time: the date, time, time zone and summer/winter time can be set manually or automatically.

Location: manual or automatic entry of the location possible.

Bluetooth: activation of permanent visibility possible. By activating permanent visibility, Bluetooth remains active on the timer and does not have to be activated manually before the connection is established.

Factory settings: choose between deleting all programs, resetting the Bluetooth settings and resetting to factory settings.

Operate the timer with the button on the front:

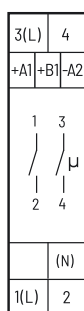
Manual switching: you can always switch on and off manually by briefly pressing the button.

Switching the AUTO function on and off: The AUTO function can be switched on and off by pressing the button > 2 seconds but < 5 seconds. If the button is pressed for 2 seconds, the green LED lights up briefly, then when it is released, the green LED signals whether the AUTO function is on or off.

If the green LED lights up for 0.3 seconds, the AUTO function is deactivated, set time and Astro programs are not executed.

If the green LED lights up for 2 seconds, the AUTO function is activated, the time switch switches according to the time and astro programs.

ASSU-BT/230V	Outdoor socket timer with Bluetooth, 1 NO contact 16A	Art. No. 30000660	83,33 €/pc.
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Manuals and documents in further languages:
<https://eltako.com/redirect/S2U12DDX-UC>

S2U12DDX-UC



2-channel timer. 1+1 NO contacts potential free 16 A/250 V AC. 230 V LED lamps up to 600 W, incandescent lamps 2000 W. With 'astro' function. Only 0.5 watt standby loss. With display backlighting.

Modular device for DIN-EN 60715 TH35 rail mounting. 1 module = 18mm wide, 58mm deep.

Patented ELTAKO Duplex technology (DX) allows you to switch normally potential free contacts in zero passage switching when 230 V A/C voltage 50 Hz is switched. This drastically reduces wear. To achieve this, simply connect the N conductor to the terminal (N) and L to 1(L) and/or 3(L). This results in an additional standby consumption of only 0.1 watt.

In the ON state, the use of bistable relays causes no coil power loss or heating. Up to 60 timer memory locations are freely assigned to the channels. With date and automatic summer/winter time changeover. Ca. 7 days power reserve without battery. Each memory location can be assigned with the astro function (automatic switching after sunrise or sundown), the switch on/off time or a pulsed switching time (which triggers an impulse of 2 seconds). The astro switch on/off time can be changed up to ± 2 hours. A time lag of up to ± 2 hours influenced by the solstices can be entered additionally.

With control input (+A1) for central control ON or OFF with priority.

Supply and control voltage for central control 12 to 230 V UC.

The timer is set using the MODE and SET buttons and a keylock function is provided.

The display illumination goes on by pressing on MODE or SET.

20 seconds after you last press MODE or SET, the program returns automatically to normal display and the display illumination goes off.

Set language: Every time the power supply is applied, press SET within 10 seconds to set the language and press MODE to confirm. D = German, GB = English, F = French, IT = Italian and ES = Spanish. The normal display then appears: weekday, time, day and month.

Rapid scroll: In the following settings, the numerals scroll rapidly when you press and hold down Enter. Release then press and hold down to change the scroll direction.

Set clock: Press MODE then at PRG (program) press SET to search for the **CLK function**. Press MODE to set. In H, press SET to select the hour and press MODE to confirm. In M proceed in the same way to set the minute.

Set date: Press MODE then at PRG press SET to search for the **DAT function**. Press MODE to select. At Y, press SET to select the year and press MODE to confirm. Proceed in the same way at M to set the month and at D to set the day. The last setting in the sequence is MO (weekday) blinking. Press SET to set it and press MODE to confirm.

Set geographic position (if astro function is required): you can find a list of German cities at the end of the operating manual. Press MODE then press SET at PRG to search for the **POS function**. Select by pressing MODE. Press SET at LAT to select the latitude. Select by pressing MODE. Repeat this procedure for LON to select the longitude and press MODE to confirm. Press SET at GMT to select the time zone and press MODE to confirm. If desired a time lag of up to ± 2 hours can be entered at WS (winter solstice) and SS (summer solstice) for both channels.

Manual switching ON or OFF with priority: Press MODE and for PRG press SET to search for **function INT**. Then press MODE to select. For CH press SET to select channel 1 or 2 and press MODE to confirm. Now you can switch between AUT (automatic) and ON or OFF using SET. After confirming with MODE the shift position of the selected channel may change. If the shift position should change automatically when a time program becomes active, AUT (automatic) should be selected again. If MODE is pressed longer than 2 seconds at confirmations the change is saved and the normal display will appear.

Summer/winter time changeover: Press MODE then at PRG press SET to search for the SWT function and press MODE to select. Now press SET to switch between ON and OFF. If you select ON, changeover is automatic.

Central control ON or OFF with priority at automatic mode (AUT): Press MODE and then SET for PRG (program) to search for the **function CIA**. Press MODE to select. Then press SET to switch from CON to COF and press MODE to confirm.

Switch random mode on/off: Press MODE then at PRG press SET to search for the RND function and press MODE to select. Press SET to set to ON (RND+) or OFF (RND) and press MODE to confirm. When random mode is switched on, all switch-on time points of all channels are shifted at random by up to 15 minutes. Switch-on times are switched earlier and switch-off times are switched later.

Entering timer programs: refer to the operating instructions.

Enable keylock: Briefly press MODE and SET together and at LCK, press SET to lock. This is displayed by an arrow next to the lock symbol.

Disable keylock: Press MODE and SET together for 2 seconds and at UNL press SET to unlock.

S2U12DDX-UC	Digital settable timer with 2 channels, 1+1 NO contacts 16 A	Art. No. 23200901	88,70 €/pc.
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The contact 15-18 corresponds on MFZ12NP to the contact L-3. The terminals A1-A2 correspond on MFZ12NP to the terminals A1-N or C1-C2. The contact 15-18 corresponds on MFZ61DX and MFZ12-230V to the contact 1-2. The terminals A1-A2 correspond on MFZ12-230V to the terminals A1-N. The contact 15-18 corresponds on MFZ12PMD to the output \otimes .

RV = Release delay (OFF delay)



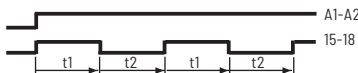
When the control voltage is applied the relay contact switches to 15-18. When the control voltage is interrupted the timing period is started; on time-out the relay contact returns to normal position. Resettable during the timing period.

AV = Operate delay (ON delay)



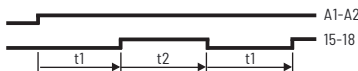
When the control voltage is applied the timing period is started; on time-out the relay contact changes to 15-18. After an interruption, the timing period is restarted.

TI = Clock generator starting with impulse (flasher relay)



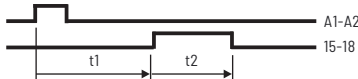
As long as the control voltage is applied the relay contact opens and closes. On MFZ12, MFZ12DX, MFZ12NP and MFZ61DX the changeover time in both directions is identical, and is equal to the preset time. On TG112DX both times can be set separately (identical time base, but additional multiplier), on MFZ12DBT, MFZ12DDX and MFZ12PMD it is completely settable separately. When the control voltage is applied the relay contact immediately changes to 15-18.

TP = Clock generator starting with pause (flasher relay)



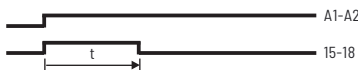
Description of function same as for TI, except that, when the control voltage is applied, the contact initially remains at 15-16 rather than changing to 15-18.

IA = Impulse-controlled operate delay



The timing period $t1$ starts with a control impulse from 50ms; on time-out the relay contact changes for the timing period $t2$ (for MFZ12 and MFZ12DX = 1 second, for MFZ12NP and MFZ61DX = 3 seconds) to 15-18 for 1 second (e.g. for automatic door opener). If $t1$ is set to $t1 \text{ min} = 0.1$ seconds, the IA operates as pulse shaper, when timing period $t2$ elapses, independent of the duration of the control impulse (min. 150 ms).

EW = Fleeting NO contact



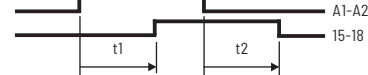
When the control voltage is applied the NO contact changes to 15-18 and reverts on wiping time-out. If the control voltage is removed during the wiping time the NO contact immediately reverts to 15-16 and the residual time is cancelled.

AW = Fleeting NC contact



When the control voltage is interrupted the NO contact changes to 15-18, and reverts on wiping time-out. If the control voltage is applied during the wiping time the NO contact immediately reverts to 15-16 and the residual time is cancelled.

ARV = Operate and release delay



When the control voltage is applied the timing period starts; on time-out the relay contact changes to 15-18. If the control voltage is interrupted then, another timing period is started and, on time-out, the relay contact returns to normal position. On MFZ12, MFZ12DX and MFZ12NP this release delay is identical to the operating delay, on MFZ12DDX and MFZ12PMD it is completely settable separately. After an interruption of the operating delay, the timing period is restarted.

ER = Relais

As long as the control contact is closed the make contact reverts from 15-16 to 15-18.

EAW = Fleeting NO contact and fleeting NC contact



When the control voltage is applied or interrupted the relay contact changes to 15-18 and reverts after the set wiping time. On MFZ12DBT, MFZ12DDX and MFZ12PMD both times can be set separately.

ES = Impulse switch

With control impulses from 50ms the make contact switches to and from.

IF = Pulse shaper



When the control voltage is applied the relay contact changes to 15-18 for the set time. Further control impulses are evaluated only after the set time has elapsed.

ARV+ = Additive operate and release delay

Same function as ARV, but after an interruption of the operate delay the elapsed time is stored.

ESV = Impulse switch with release delay and switch-off early-warning function

Function same as SRV. Additionally with switch-off early warning: approx. 30 sec. before time-out the lighting starts flickering 3 times at gradually shorter time intervals.

AV+ = Additive operate delay

Function same as AV. However, after an interruption the elapsed time is stored.

SRV = Release-delay impulse switch

With control impulses from 50ms the make contact switches to and from. In the contact position 15-18, the device switches automatically to the rest position 15-16 on delay time-out.

TECHNICAL DATA MULTIFUNCTION TIME RELAYS, TIME RELAYS AND TIMERS

Type	MFZ12DX-230V ^{b)} MFZ12DBT ^{b)} MFZ12DDX ^{b)} MFZ12DX-UC ^{b)} RVZ/AVZ/TGI/ EAW12DX ^{b)}	MFZ12NP PTN12	A2Z12-UC ^{b)}	MFZ61DX ^{b)}	S2U12DDX ^{b)} SU12DBT/1+1 ^{b)} S2U12DBT ^{b)} SU62PF-BT/UC ^{b)}	ASSU-BT ^{b)}
Contacts						
Contact material/contact gap	AgSnO ₂ /0.5 mm	AgSnO ₂ /0.5 mm	AgSnO ₂ /0.5 mm	AgSnO ₂ /0.5 mm	AgSnO ₂ /0.5 mm	AgSnO ₂ /0.5 mm
Spacing of control connections/contact	6 mm	3 mm	6 mm	6 mm	6 mm	—
Spacing of control connections C1-C2/contact	—	6 mm	—	—	—	—
Test voltage contact/contact	—	—	A2Z12: 4000 V	—	2000 V	—
Test voltage control connections/contact	4000 V	2000 V	4000 V	4000 V	4000 V	—
Test voltage C1-C2/contact	—	4000 V	—	—	—	—
Rated switching capacity	10 A/250 V AC MFZ12DX/230V: 16 A/250 V AC	16 A/250 V AC	10 A/250 V AC	10 A/250 V AC	16 A/250 V AC S2U12DBT, SU62PF-BT/UC: 10 A/250 V AC	16 A/250 V AC
230 V LED lamps	up to 200 W ⁵⁾ I on ≤ 120 A/5 ms	up to 200 W ⁵⁾ I on ≤ 30 A/20 ms	up to 200 W ⁵⁾ I on ≤ 120 A/5 ms	up to 200 W ⁵⁾ I on ≤ 120 A/5 ms	up to 600 W ⁵⁾ I on ≤ 120 A/5 ms SU62PF-BT/UC: bis zu 200 W ⁵⁾ I on ≤ 120 A/5 ms	up to 400 W ⁵⁾ I on ≤ 120 A/5 ms
Incandescent lamp and halogen lamp load ¹⁾ 230 V, I on ≤ 70 A/10 ms	2000 W ³⁾	2300 W ³⁾	1000 W ³⁾	2000 W ³⁾	2000 W ³⁾	2300 W ³⁾
Fluorescent lamp load with KVG* in lead-lag circuit or non compensated	1000 VA ³⁾	1000 VA ³⁾	500 VA ³⁾	1000 VA ³⁾	1000 VA ³⁾	1000 VA ³⁾
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500 VA ³⁾	500 VA ³⁾	250 VA ³⁾	500 VA ³⁾	500 VA ³⁾	500 VA ³⁾
Compact fluorescent lamps with EVG* and energy saving lamps ESL	15x7 W 10x20 W ³⁾⁴⁾⁵⁾	15x7 W 10x20 W ³⁾⁵⁾	I on ≤ 35 A/10 ms ²⁾³⁾⁵⁾	15x7 W 10x20 W ³⁾⁴⁾⁵⁾	15x7 W 10x20 W ³⁾⁴⁾⁵⁾	15x7 W 10x20 W ³⁾⁴⁾⁵⁾
Max. switching current DC1: 12 V/24 V DC	8 A	—	8 A	8 A	8 A	—
Life at rated load, cos φ = 1 for incandescent lamps 1000 W at 100/h	> 10 ⁶	> 10 ⁶	> 10 ⁶	> 10 ⁶	> 10 ⁶	> 10 ⁶
Life at rated load, cos φ = 0.6 at 100/h	> 4x10 ⁴	> 4x10 ⁴	> 4x10 ⁴	> 4x10 ⁴	> 4x10 ⁴	> 4x10 ⁴
Maximum conductor cross-section (3-fold terminal)	6 mm ² (4 mm ²)	6 mm ² (4 mm ²)	6 mm ² (4 mm ²)	4 mm ²	6 mm ² (4 mm ²)	—
Two conductors of same cross-section (3-fold terminal)	2.5 mm ² (1.5 mm ²)	2.5 mm ² (1.5 mm ²)	2.5 mm ² (1.5 mm ²)	1.5 mm ²	2.5 mm ² (1.5 mm ²)	—
Screw head	slotted/crosshead, pozidriv	slotted/crosshead, pozidriv	slotted/crosshead, pozidriv	slotted/crosshead	slotted/crosshead, pozidriv	—
Type of enclosure/terminals	IP50/IP20	IP50/IP20	IP50/IP20	IP30/IP20	IP50/IP20	IP44
Electronics						
Time on	100%	100%	100%	100%	100%	100%
Max./min. temperature at mounting location	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C
Temperature dependence	< 0.2% per °C	< 0.2% per °C	< 0.2% per °C	< 0.2% per °C	< 0.2% per °C	< 0.2% je °C
Repeat accuracy at 25°C	±0.1%	±0.1%	±0.1%	±0.1%	±0.1%	±0.1%
Control voltage dependence from 0.9 to 1.1x rated voltage	none	none	none	none	none	none
Stored energy time in the event of power failure (then total reset)	≥ 0.2 seconds	≥ 0.2 seconds	0.2 seconds	≥ 0.2 seconds	7 days	7 days
Standby loss (active power) 230 V	MFZ12DX/230V: 0.4-0.5 W MFZ12DBT: 0.3 W; MFZ12DDX: 0.5 W; MFZ12DX-UC: 0.4-0.6 W; RVZ/AVZ/TGI/EAW12: 0.4 W	0.5 W	0.4 W	0.4 W	0.3 W S2U12DDX: 0.5 W	0.3 W
Standby loss (active power) 12 V/24 V	0.02 W/0.04 W; MFZ12DDX: 0.05 W/0.1 W	—	—	0.02 W/0.04 W	0.03 W/0.06 W S2U12DBT, SU12DBT: 0.1 W	—
Control current 230 V-control input local ±20%	—	2 mA	2 mA; A2Z12: —	—	—	—
Control current universal control voltage 8/12/24/230 V (<10 s) ± 20%	0.05/0.1/ 0.2/1 mA	2/4/9/5 (100) mA	A2Z12: 0.05/ 0.1/0.2/1 mA	0.05/0.1/ 0.2/1 mA	0.04/0.05/ 0.1/1.2 mA	—
Max. parallel capacitance (approx. length) of the control leads at 230 V AC	0.2 µF (600 m)	0.01 µF (30 m) C1-C2: 0.03 µF (100 m)	0.01 µF (30 m); A2Z12: 0.2 µF (600 m)	0.2 µF (600 m)	0.2 µF (600 m)	—

* EVG = electronic ballast units; KVG = conventional ballast units ^{b)} Bistable relay as relay contact. The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated. ¹⁾ For lamps with a load of 150 W max. ²⁾ A 40-fold inrush current must be calculated for electronic ballast devices. For steady loads of 1200 W or 600 W use the current-limiting relay SBR12 or SBR61. See chapter 14, page 14-8. ³⁾ The maximum load can be used from a delay time or clock cycle of 5 minutes. The maximum load is reduced for shorter times as follows: up to 2 seconds 15%, up to 2 minutes 30%, up to 5 minutes 60%. ⁴⁾ When using DX types close attention must be paid that zero passage switching is activated! ⁵⁾ Usually applies for dimmable 230 V LED lamps and dimmable energy saving lamps. Due to different lamp electronics and depending on the manufacturer, the maximum number of lamps may be limited, especially if the wattage of the individual lamps is very low (e.g. with 2 W LEDs).

According to DIN VDE 0100-443 and DIN VDE 0100-534, the installation of a surge arrester (SPD) is mandatory.
ELTAKO offers suitable, standard-compliant surge arresters of types 1, 2, and 3 – see Main catalogue Chapter 8, "Surge Arresters."

Compliance with: EN 61000-6-3, EN 61000-6-1, EN 60 669 (S2U12DDX: EN 60730-1)

The Eltako logo, featuring the word "Eltako" in a stylized, italicized blue font.

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