Eltako SWITCHGEAR

DMZ12.1 programmable digital universal-voltage multifunction time relay and DZ12 digital programmable universal-voltage time relays

Time relays to German standard DIN VDE 0435
Rated switching capacity 10 A/250 V AC
Control voltage 12 ..230 V DC/AC (50/60 Hz)
Times between 0,1 seconds and 99 hours.

CE 4925

Multifunction time relay	**DMZ12.1-001-12..230V UC**
Release delay (OFF delay)	**DZ12 RV-001-12..230V UC**
Operate delay (ON delay)	**DZ12 AV-001-12..230V UC**
Clock generator (flasher relay)	**DZ12 TI-001-12..230V UC**
Passing make-contact relay	**DZ12 EW-001-12..230V UC**
Passing break-contact relay	**DZ12 AW-001-12..230V UC**
Operating and release delay	**DZ12 ARV-001-12..230V UC**
Release delay impulse switch	**DZ12 SRV-001-12..230V UC**

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.

With all other functions, the set time, the function code, the contact symbol is displayed in the correct position (open or closed).

The clock symbol flashes while the set time is elapsing and the remaining time will be shown.

Safety in the event of a power failure

The set parameters are stored in an EEPROM and are therefore immediately available again on restoration of the power supply after a power failure.

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 can be the function, a time range, time t1 or time t2 (only with ARV, TI, IA and TP). Each input is terminated by pressing MODE key. Once the time has been set with MODE, no more components are flashing. The time relay is now ready to operate.

When pressing MODE again, the input cycle starts from the beginning. All the set parameters are retained if they are not changed by pressing SET.

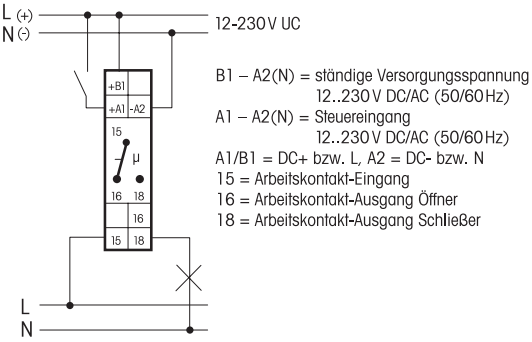
When setting the "on time", all values can be entered within the given time frame (0.1-9.9 or 1-99 seconds, minutes or hours). The time setting resp. the two set times (for ARV, ARV+,TI, IA and TP) are continously displayed digitally.

The setting of times and functions will only operate correctly as long as the control input A1 will not be controlled.

Functions (only DMZ12.1):

AV = operate delay
AV+ = additive operate delay
RV = release delay
ARV = operate and release delay
ARV+ = additive operate and release delay
IA = impulse controlled operate delay
(for example: automatic door-opener)
SRV = release delay impulse switch
EW = passing make contact
AW = passing break contact
TI = clock generator starting with impulse
TP = clock generator starting with pause
ON = maintained ON
OFF = maintained OFF

Connection example for DMZ12.1 and DZ12



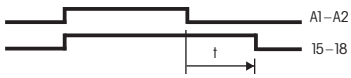
B1 – A2(N) = ständige Versorgungsspannung
12..230 V DC/AC (50/60 Hz)
A1 – A2(N) = Steuereingang
12..230 V DC/AC (50/60 Hz)
A1/B1 = DC+ bzw. L, A2 = DC- bzw. N
15 = Arbeitskontakt-Eingang
16 = Arbeitskontakt-Ausgang Öffner
18 = Arbeitskontakt-Ausgang Schließer

The control input is immune to interaction, thus allowing parallel operation. The contacts are isolated. The rated insulation voltage to power supply and control input is 250 V.

Neon lamps in parallel to the control pushbuttons are not permitted.

Functional descriptions of time relays DMZ12.1 and DZ12

RV = Release delay (OFF delay)

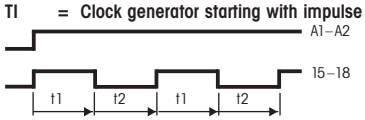


When the control voltage is applied the make contact switches from 15-16 to 15-18. As the control voltage is interrupted the timing period is started; on time-out the make contact returns to normal position 15-16 Re-settable during the timing period.

AV = Operate delay (ON delay)

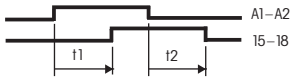
When the control voltage is applied the timing period is started; on time-out the make contact changes from 15-16 to 15-18. After an interruption, the timing period is restarted.

TI = Clock generator starting with impulse (flasher relay)



As long as the control voltage is applied the make contact alternates between 15-16 and 15-18. When the control voltage is applied the make contact immediately changes to 15-18.

ARV = Operating and release delay

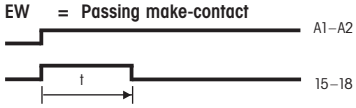


When the control voltage is applied the timing period starts; on time-out the make contact changes from 15-16 to 15-18. If then, the control voltage is interrupted another timing period is started and, on time-out, the make contact reverts to normal position 15-16.

SRV = Release-delay impulse switch

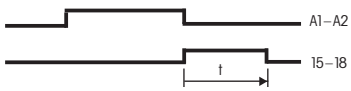
With control impulses from 50 ms the make contact alternates between 15-16 and 15-18. In position 15-18, on delay time-out the device automatically switches to 15-16.

EW = Passing make-contact



When the control voltage is applied the make contact changes from 15-16 to 15-18 and reverts on wiping time-out. If the control voltage is removed during the wiping time the make contact immediately reverts to 15-16 and the residual time is cancelled.

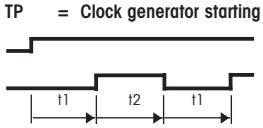
AW = Passing break-contact



When the control voltage is interrupted the make contact changes from 15-16 to 15-18, and reverts on wiping time-out. If the control voltage is applied during the wiping time the make contact immediately reverts to 15-16 and the residual time is cancelled.

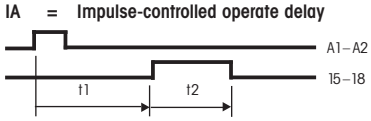
Additional functions for DMZ12.1 multifunction time relay

TP = Clock generator starting with pause (flasher relay)



Description of function same as for TI, exept 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



With a control impulse from 20ms the timing period t1 starts; on time-out the make contact changes from 15-16 to 15-18 for 1second (e.g. for automatic door opener).

AV+ = Additive operate delay
Same function as AV, but after an interruption the elapsed time will be stored.

ARV+ = Additive operate and release delay
Same function as ARV, but after an interruption of the operate delay the elapsed time will be stored.

Warning!
Installation and mounting of these electrical devices only by a professional.

07/2001 Subject to change without notice