

timer

## Multifunction timer relay ZMRF

for remote potentiometer and with galvanic isolation inside  
serie 17,5mm with 1 o. 2 change over



### Application

Time control for electric isolated applikations.

### Description

The ZMRF **Multi-function timer** offers 7 selectable timing functions and 8 different timing intervals in one unit. The function and timing intervals can be adjusted with DIP switches on the front panel of the relay. The multi-function timer can operate on either AC or DC voltage using two separate connections. To connect to 230V AC the terminals A1 and A2 are used. For a connection with 24V DC use the terminals A3 and A2. The green LED indicates the connection to the power supply. Timing commences with the connection of the power supply or with an external control contact connected to the terminals B1 and B2.

**B1/B2/P is inside galvanic isolated from the power supply connectors A1/A2/A3.**

### Options

Other timing ranges and voltages available upon request.

### Mounting

Snap-on mounting using a standard DIN rail EN 50022. The unit is designed to allow side-by-side mounting, with an ambient temperature of < 60°C.

### Approvals



### Article number

011220  
011221

ZMRF1 1 change over  
ZMRF2 2 change over

### DIP switch adjustments

	Funktionen			Zeiten			
delay on operate				0,05	-	1s	
delay on release*				0,5	-	10s	
pulse on operate				3	-	60s	
pulse on releasae*				15	-	300s	
flashing start with off				0,5	-	10 min.	
flashing start with on				3	-	60 min.	
watchdog*				15	-	300 min.	
				0,5	-	10 h	

\* For external start contact.

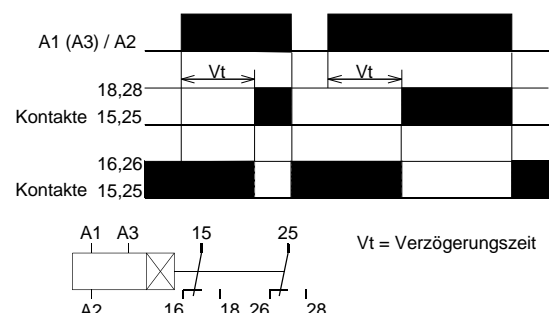
### Time adujst

Select the wished time range on the dip switch on the front panel. Adjust the wished time with the internal or external (10k) potentiometer between the selected time range.

**If an external potentiometer is connected the internal potentiometer is automatic electronic deactivated, so that the position from the internal potentiometer has no influence to the time value.**

### Function

**Delay-on operate:** Timing begins with the connection of the power supply. After the set time has elapsed, the output relay is energized. The red LED indicates the working position of the output contact. If the supply voltage is disconnected, the output relay resets and the elapsed time is cancelled. If the supply voltage is disconnected during the reset time, the timer returns to its original state.

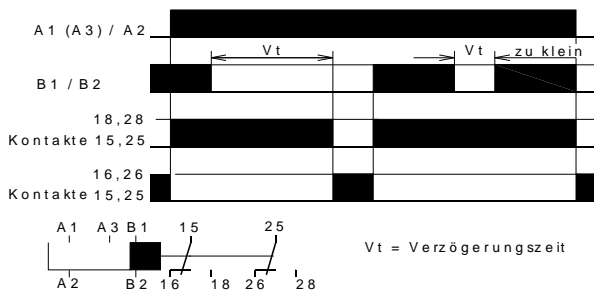


## timer

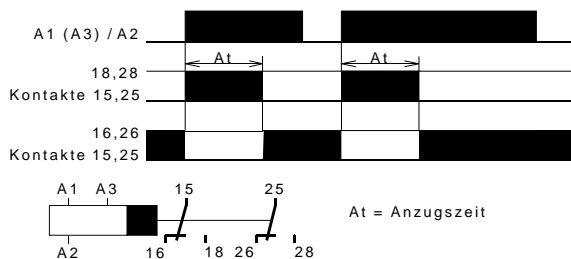
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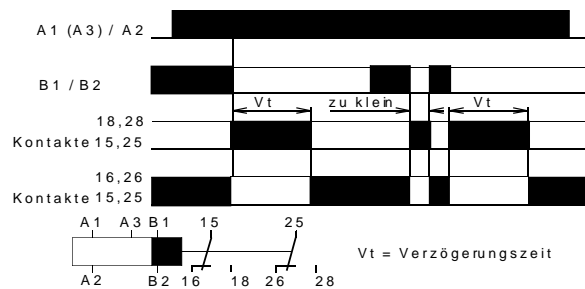
**Delay-on release:** Continuous presence of the power supply connected to the terminals A1 and A2 or A3 and A2 is required for timing. The activation of the timing function is accomplished with an external control contact, which is connected to the terminals B1 and B2. If this control contact is closed then the output relay is energized. With the opening of the control contact, the timer is started, and the set time begins to count down. After the delay time has elapsed, the output relay is de-energized. If during or upon completion of the timing function the control contact is closed and reopened, the timing period begins again. This also applies if the supply is disconnected during the timing period.



**Pulse-on operate:** The timing begins with the connection of the power supply to the terminals A1 and A2 or A3 and A2. After applying the power supply the output relay is energized without delay and is de-energized after the pulse set time has elapsed. The red LED indicates the working position of the output relay. If the power supply is disconnected before the set pulse time has elapsed, the output relay is de-energized with no delay. This also applies if the supply is disconnected during the timing period.

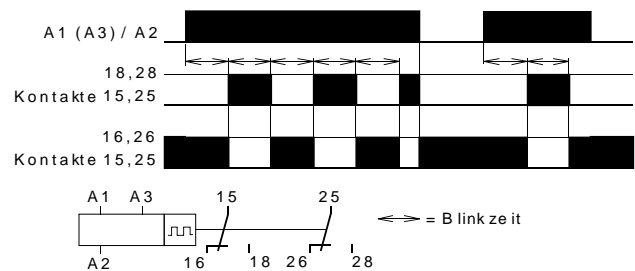


**Pulse-on release:** Continuous presence of the power supply connected to the terminals A1 and A2 or A3 and A2 is required for timing. The activation of the timing function is accomplished with an external potential-free control contact, which is connected to the terminals B1 and B2. When the power supply is applied, the control contact is opened, the output relay is energized and the timing is started. The output relay stays active for the set pulse time and is de-energized after this time has elapsed. The red LED indicates the working position of the control contact. If during or upon completion of the timing function the control contact is closed and reopened, the timing period begins again. This also applies if the supply is disconnected during the timing period.



**Flasher beginning with on:** The timing begins with the connection of the power supply to the terminals A1 and A2 or A3 and A2. The timing cycle begins with a pulse. After completion of the selected delay time the output relay switches to its rest position. After renewed completion of the selected timing cycle the relay energizes to its working position. The red LED indicates the selected interval time of the output relay. This cycle repeats as long as the power supply is connected. Should the power supply be disconnected during the reset time, the timer returns to its original state. This also applies if the supply is disconnected during the timing period.

**Flasher beginning with off:** Same as before, but start with pause



**watchdog:** Continuous presence of the power supply connected to the terminals A1 and A2 or A3 and A2 is required for timing. The activation of the timing function is accomplished with an external potential-free control contact, which is connected to the terminals B1 and B2. Time control for maximum close time and for maximum open time for the external control contact. The relay is energized, if the close time and the open time are lower as the adjusted time.

