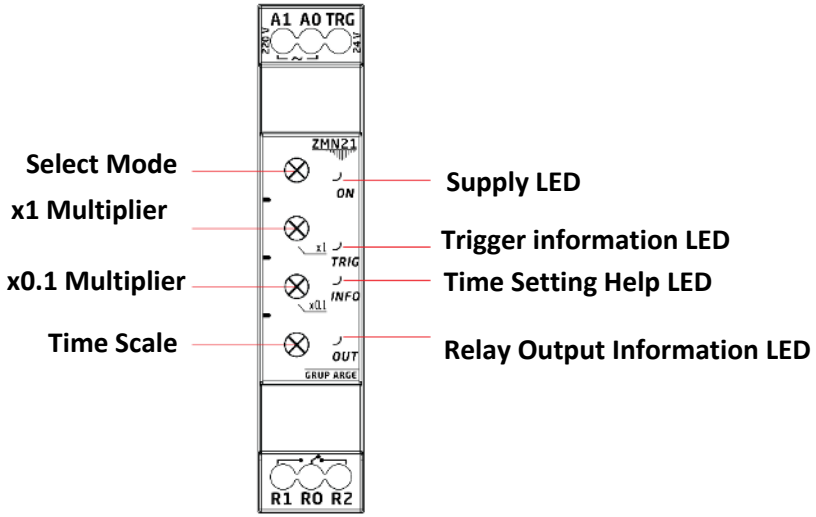
LED Descriptions:



LED Descriptions:

●	**ON**	It indicates that energy is available. It also blinks when the potentiometer changes.
●	**TRIG**	If the selected mode is a Trig mode and trig is detected, it lights. If trig is not detected, it turns off.
◐	**INFO**	When setting the potentiometer, if the time value is set correctly, it lights up, if it remains in the unstable area, it turns off.
●	**OUT**	It lights up when the relay is pulled and turns off when it is not pulled.

Table:1

* ◐ Flasher

* ● Lighting

TIME RELAYS (ZMN21) USER MANUAL

Technical Features:

Operating Voltage (Un)	180 – 280 V AC
Operating Frequency	50 / 60 Hz.
Time Range	0.1 sec-99 hours. (ZMN21)
Relay Output	1C/O, 5A, 1250 VA
Adjustment Type	Potentiometer
Indicator	4 pieces LED
Ambient Temperature	-5°C ; +50°C
Protection Class	IP20
Connection	DIN rail mounting

Table:2

Function Table

A Mode	Delayed Dropout
B Mode	Delayed Pulling
C Mode	Symmetrical Flasher
D Mode	Delayed Pull-out with Control Input
E Mode	Delayed Release **w**ith Control Input
F Mode	Delayed pulling on rising edge, delayed dropping on falling edge
G Mode	Rising and Falling Delayed Drop-Off
H Mode	Delayed One-Second Pulse on Triggered Pull

Table:3

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Use of the Device:

ZMN21 Time Relays;
The ZMN21 model is a multi-mode time relay model. Mode selection can be made with the first potentiometer on it. The time setting and mode selection are read only at the first power-on of the device. In other words, when the device is running in any mode, if the time or mode is changed, there will be no change in the operation of the device. In order to set a new mode and new time, the supply voltage must be disconnected and restarted. The ZMN21 model also has the INFO LED feature. Thanks to this feature, while the user is setting time or mode with potentiometers, the change is locked to the detected potentiometer and informs that the adjustment is correct. In other words, the INFO LED turns off if it is in the intermediate (critical) areas, and the INFO LED turns on if it is in the safe areas. At the same time, when the device is first energized, if any of the potentiometers is in a critical area, the INFO LED works as a flasher.

A Mode: It is a delayed release mode. When the supply voltage is applied, regardless of the trigger input, the relay immediately pulls in and the green relay LED lights up. At the end of the set T-ON time, relay releases and remains in closed position until energy is removed.

B Mode: It is delayed opening mode. When the supply voltage arrives, the T-OFF time starts counting independently of the trigger input. At the end of the set T-OFF time, the relay pulls out, the relay LED lights up and remains in the towed position until the supply voltage goes out.

C Mode: It is Symmetrical Flasher mode. The flasher behavior, which starts as a T-OFF start when the energy arrives, at the end of the set T-OFF time it pulls the relay and releases the relay at the end of the T-ON time and continues this process periodically. The set time is the same for T-OFF and T-ON.

D Mode: The set T-OFF time starts counting when the signal is applied to the control input. The relay pulls out at the end of the T-OFF time. Relay maintains its position until the supply voltage of the device is disconnected or the trigger signal is cut off. If the trigger signal is cut off before the T-OFF time, the counted T-OFF time is deleted.

E Mode: When signal is applied to the control input, the relay pulls immediately and the relay LED lights up. If trigger signal is interrupted, the time starts counting. At the end of the time the relay releases. If the trigger input is interrupted again before the end of time , the time is deleted.

F Mode: Upon application of supply voltage and trigger signal, T-OFF time starts counting and relay pulls out at the end of the time. When the trigger signal is interrupted, the T-ON time starts counting and the relay changes its position at the end of the time.

G Mode: Upon application of supply voltage and misfire signal, the relay remains in the pulled position for the set T-ON time. The T-ON time starts counting again when the misfire signal is cut off and the relay switches back to the pulled position for this time. If the signal is applied or disconnected, the relay output remains pulled for the set time. When the trigger signal is cut and applied again, the time starts counting from the beginning.

H Mode: Upon application of the supply voltage and trigger signal, the T-ON time starts counting and the relay output is pulled for 1 second at the end of the time. When the trigger signal is applied again before the end of the T-OFF time, the time is reset and the T-OFF time starts from the beginning.

TIME RELAYS (ZMN21) USER MANUAL

Selection Table:

Product Model	ZMN21
Time Range	0.1sec-99h
Pull Delayed	√
Drop Delayed	√
Symmetrical Flasher	√
Delayed Dropout with Control Input	√
Delayed Drop-Off on the Falling Edge on the Rising Edge	√
Triggered Pull Delayed 1-second Pulse Triggered Drop Delayed	√
Triggered	√
Contact Output	1C/O, 5A, 1250 VA
220 V AC	√
DIN I Box	√

Table:4

Time Account:

X1	X0.1	Mod	Set time
3	9	1s	3.9 seconds
3	9	10s	39 seconds
3	9	1m	3.9 Minutes
3	9	10m	39 Minutes

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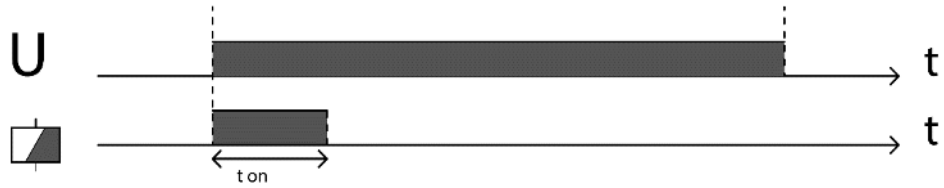
Function Diagram:

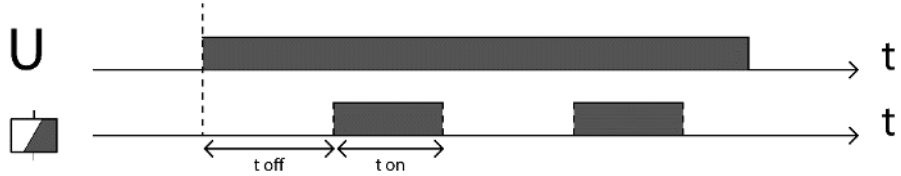
R /	Relay
U	Source Voltage
T	Trigger Signal

A Mode:

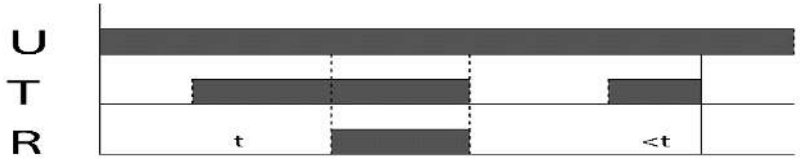


B Mode:

C Mode:

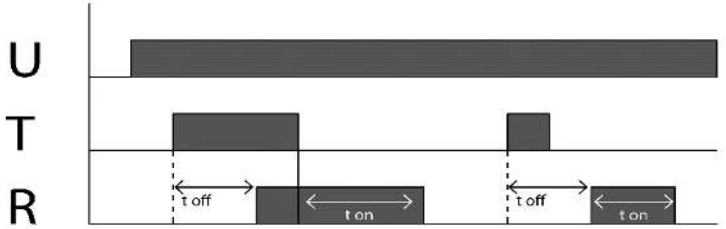


D Mode:

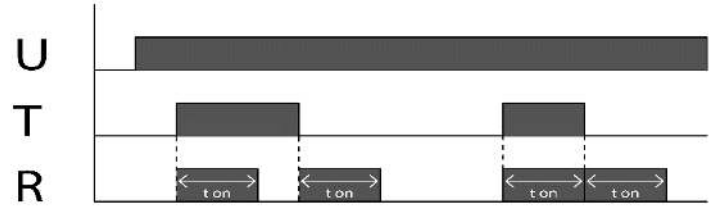


E Mode:

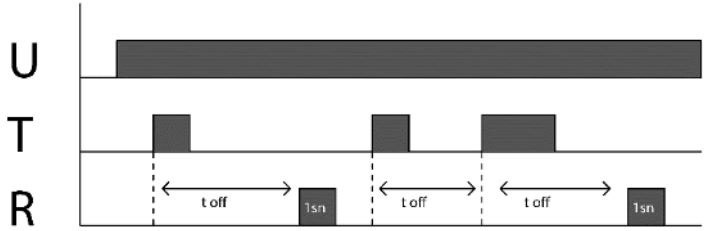
F Mode:



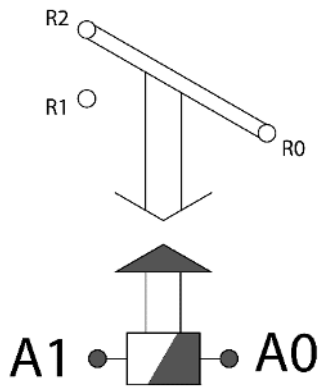
G Mode:



H Mode:

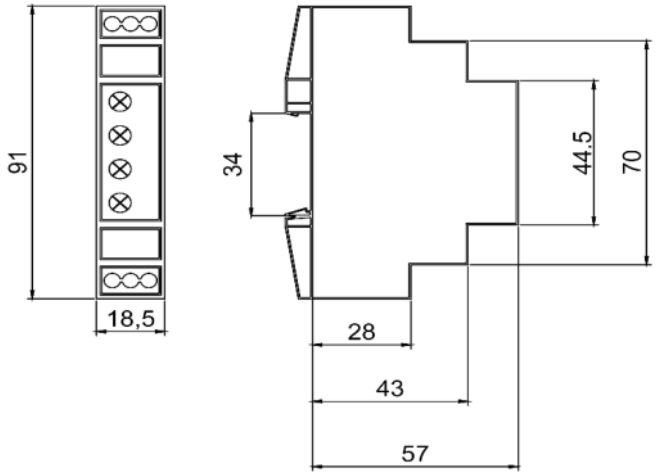


Connection Diagram:



(180-280 V AC/DC)

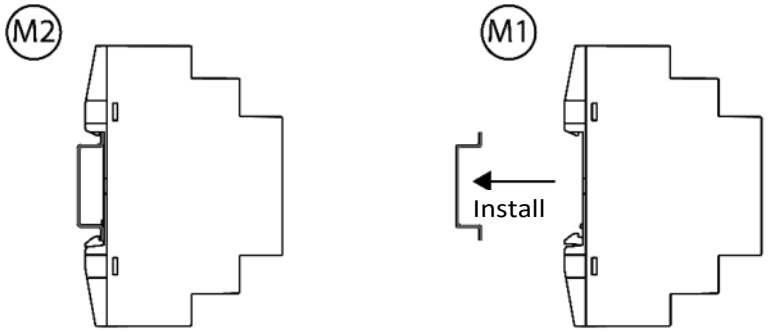
Product Size(mm):



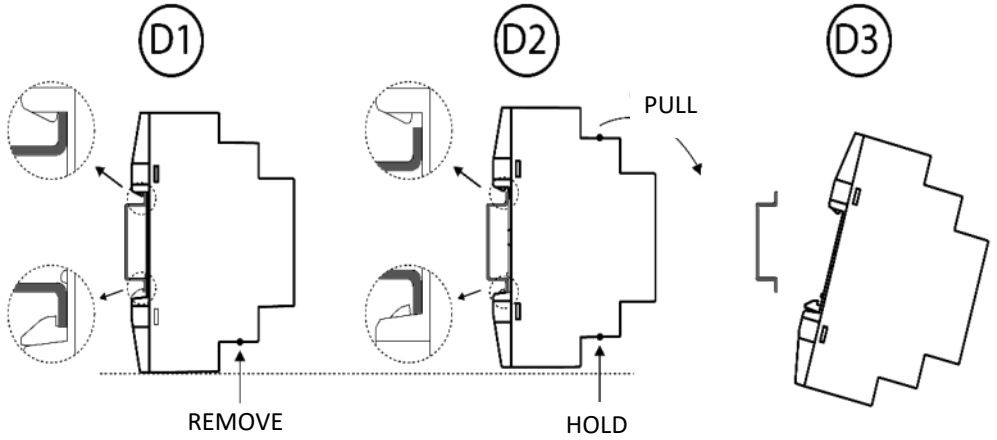
TIME RELAYS (ZMN21) USER MANUAL

Product Installation:

Time Relay Installation



Time Relay Disassembly



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