

# Time Relay MT-TUA-17S-11-9240

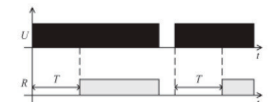
## Instruction Manual



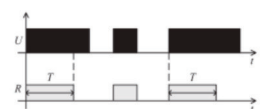
Programme settings should be set before switching the unit on!

### Time Functions

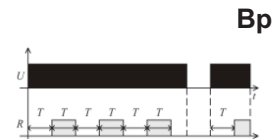
**E - On Delay:** After supply voltage U has been switched on, the set time T is being measured. After the T time has lapsed, the R operating relay shall start operating and remains in operating position until the supply voltage U is switched off.



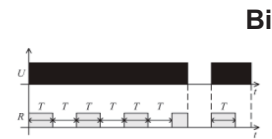
**Wu - Single shot leading edge voltage controlled.** After the supply voltage U has been switched on, the operating relay R starts immediately and the set time T is being measured. After the set time T has lapsed, the operating relay R returns to the initial position.



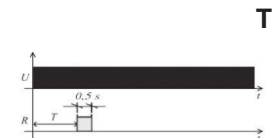
**Bp - Flasher pause first:** After the supply voltage U has been switched on, the set time T is being measured. After the time has lapsed, the operating relay R starts operating and the T time is being measured again. After the time has lapsed, the operating relay R returns to the initial state, and another cycle of the relay operation commences. The relay operates until the supply voltage is switched off.



**Bi - Flasher pulse first:** After the supply voltage U has been switched on, the set time T is measured and the operation relay R is switched on. After the time has lapsed, the operating relay R starts operating and the time T is being measured again. After the time has lapsed, the operating relay R returns to the initial state, and another cycle of the relay operation commences. The relay operates until the supply voltage is switched off.



**T - generating the 0.5s pulse after the T time.**



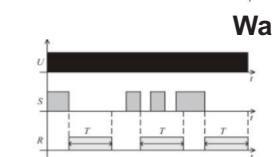
**R- OFF Delay:** The supply voltage U must be constantly applied to the time relay. After the control contact S has been closed, the operating relay R starts operation immediately. After the control contact S has been opened, the set time T is being measured. After the T time has lapsed, the operating relay R returns to the initial position. When the control contact S is closed again, even before the T time has lapsed, the time measured thus far is reset, and when S is opened, the set time T is being measured again.



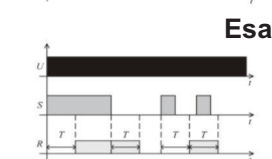
**Ws - Single shot leading edge with control contact:** The supply voltage U must be constantly applied to the time relay. After the control contact S has been closed, the operating relay R starts immediately and the set time T is being measured. After the set time T has lapsed, the operating relay R returns to the initial position. In course of measuring the T time, the control contact S may be closed and opened repeatedly with no impact upon the operating relay R. Only after the T time has lapsed, closing S will make the operating relay R operate and the T time will be measured.



**Wa - Single shot trailing edge with control contact:** The supply voltage U must be constantly applied to the time relay. Closing of the control contact S does not trigger the measurement of the time delay or operation of the operating relay R. Only opening of the control contact S causes the immediate operation of the operating relay R, and the set time T is being measured. After the T time has lapsed, the operating relay R returns to the initial position. In course of measuring the T time, the control contact S may be closed and opened repeatedly with no impact upon the output relay. Only after the T time has lapsed, closing and opening of S will make the operating relay R operate and the T time will be measured.



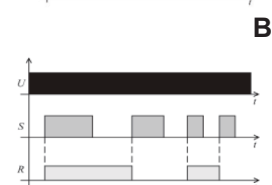
**Esa - ON and OFF delay with control contact:** The supply voltage U must be constantly applied to the time relay. After the control contact S has been closed, the set time T is being measured and when it lapses the operating relay R is switched on. On opening of the control contact S the set time T is measured again, and after the time has lapsed, the operating relay R is switched off. In case the time of closing the control contact S is shorter than the set time delay T, the operating relay R shall start operation after the set delay has lapsed, and it will continue to operate for the T time. In course of the operation of the R relay, closing of the control contact S does not affect the function.



**B - Bistable relay leading edge with control contact.**

Each closing of the control contact S changes the operating relay status to the opposite one (a feature of a bi-stable relay).

**Permanent switching ON and OFF.** The functions ON and OFF are selected with the TIME potentiometer. In the ON function the normally open contacts are closed all the time whereas in the OFF function they are open. The position of the FUNC potentiometer is of no significance when the ON / OFF function is selected.



E

Wu

Bp

Bi

T

R

Ws

Wa

Esa

B



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## Instruction Manual



### Disposal of Electrical Waste

All electrical waste should be disposed of in compliance with current WEEE regulations.



### Caution, Hazards

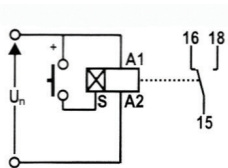
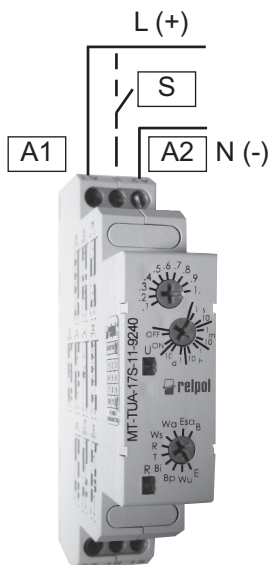
Time relays must be installed by qualified electricians. All and any electrical connections of the time relay shall comply with the appropriate safety standards.

### Description of Relay: Multifunction time relay MT-TUA-17S-11-9240

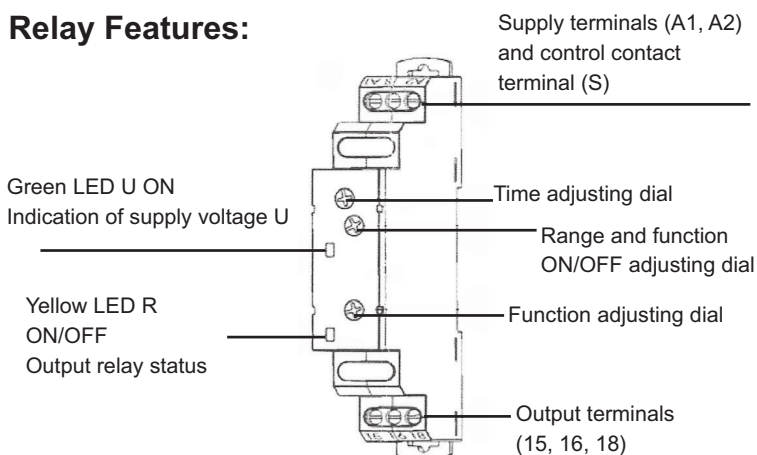
- 10 time functions
- 8 time ranges
- Cadmium - free contacts
- AC/DC input voltages
- Module width: 17.5mm
- Direct mounting on 35mm din rail in accordance with PN-EN 60715 (wiring: 1 x 2.5mm<sup>2</sup>, 2 x 1.5mm<sup>2</sup>)
- Application: in low voltage systems
- Compliance with standard PN-EN 61812-1
- Recognition, certification, directives: **CE**

### Connection Diagram:

**Supply voltage:**  
12.....240V AC/DC  
AC: 50/60Hz



### Relay Features:



### Technical Data:

Output Circuit - Contact Data	
Number and type of contacts	1P / 1CO (Changeover)
Contact material	AgNi
Max. switching voltage	400V AC / 300V DC
Rated Load	AC1: 16A / 250V AC
Min. breaking capacity	0.3W 5V, 5mA
Input Control Circuit	
Rated Voltage	12...240V AC/DC AC 50/60 Hz terminals (+) A1 - (-) A2
Overvoltage category	II
Insulation pollution degree	1
Dielectric strength	Input - output: 2 500V AC ① Contact clearance: 1 000 V AC ②
General Data	
Dimensions (L x W x H)	90 ③ x 17.5 x 63.5mm (weight: 64g)
Storage / operating temperature	- 40 to + 70°C / - 20 to + 45°C
Cover protection category	IP20 PN-EN 60529
Time Module Data	
Functions	E, Wu, Bp, Bi, T, R, Ws, Wa, Esa, B, (ON/OFF ④)
Time ranges	1s ⑤; 10s; 1 min.; 1 h; 10h; 1 d; 10 d
Setting accuracy	+ 5% ⑥ ⑤
Repeatability	+ 5% ⑤

- ① Type of insulation: Basic
- ② Type of clearance: micro-disconnection
- ③ Length with 35mm rail taps: 98.8mm
- ④ Permanent switching ON and OFF
- ⑤ For first range set point (1s) setting accuracy and repeatability are smaller than the given ones in technical parameters (significant influence of the operational relay operating time, processor start time, and at the moment of supply switching as referred to the AC supply course).
- ⑥ For the minimum to maximum direction of the time adjust dial.