Extended multifunction time relay RT8-N
Instruction Manual



General

■Applications
-Multifunction time relay can be used for electrical appliances, control of lights, heating, motors, pumps and fans (10 functions, 10 time ranges, multi-voltage).

■Function Features
-10 functions: - 8 time functions controlled by supply voltage
- 2 time functions controlled by control input

-Comfortable and well-arranged function and time-range setting by rotary switches.
-Time scale 0.1 s - 10 days divided into 10 ranges.
- Relay status is indicated by LED.
- 1-MODULE,DIN rail mounting.

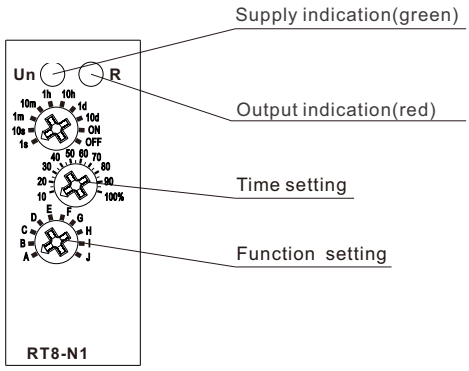
■Model and connotation

RT8 – N □/□
- Rated control supply voltage:
  A230:AC230V
  W240:AC/DC12V-240V
- Number of contacts:
  1:1×SPDT
  2:2×SPDT
- Extended multifunctional time relay
- RT8 Series

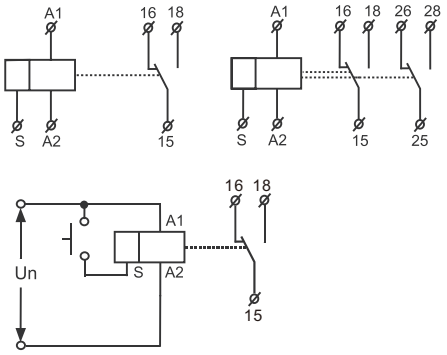
Technical parameters

Technical parameters		RT8-N1	RT8-N2
Function		A,As,Aw,B,Bs,Bw,Cs,Ds,Fe,Js	
Supply terminals		A1-A2	
Voltage range	W240	AC/DC 12-240V(50-60Hz)	
Burden	W240	AC 0.09-3VA/DC 0.05-1.7W	
Voltage range	A230	AC 230V(50-60Hz)	
Power input	A230	AC max.6VA/1.3W	AC max.6VA/1.9W
Supply voltage tolerance		-15%;+10%	
Supply indication		green LED	
Time ranges		0.1s-10days,ON,OFF	
Time setting		potentionmeter	
Time deviation		10%-mechanical setting	
Repeat accuracy		0.2%-set value stability	
Temperature coecient		0.05%/℃,at=20℃(0.05%℉，at=68℉)	
Output		1×SPDT	2×SPDT
Current rating		16A/AC1	
Switching voltage		250VAC/24VDC	
Min.breaking capacity DC		500mW	
Output indication		red LED	
Mechanical life		1×10^7	
Electrical life(AC1)		1×10^5	
Reset time		max.200ms	
Operating temperature		-20℃ to +55℃ (-4℉ to 131℉)	
Storage temperature		-35℃ to +75℃ (-22℉ to 158℉)	
Mounting/DIN rail		Din rail EN/IEC 60715	
Protection degree		IP40 for front panel/IP20 terminals	
Operating position		any	
Overvoltage cathegory		III.	
Pollution degree		2	
Max.cable size(mm^2)		solid wire max.1×2. 5or 2×1. 5/with sleeve max.1×2. 5(AWG 12)	
Tightening torque		0.4Nm	
Dimensions		90×18×64mm	
Weight		1×SPDT: W240-63g,A230-62g	
		2×SPDT: W240-82g,A230-81g	
Standards		EN 61812-1,IEC60947-5-1	

Panel Diagram



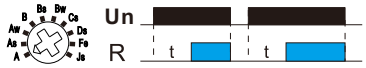
Wiring Diagram



Functions Diagram

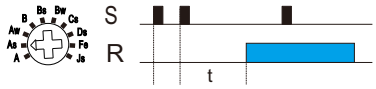
A:On delay (Power On)

When relay Un is powered on, the relay starts to delay, and the output contact is closed after delay t. After the relay Un is de energized, the output contact R is disconnected and the S control signal is invalid in this function mode.



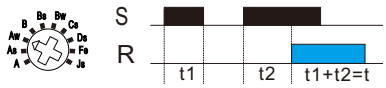
As:On delay (S rising edge start)

The relay Un is in the energized state. When the S control signal is triggered, the relay starts to delay.After the delay t, the output contact R is closed and held. During the delay period, if the signal is triggered again, restart the delay.When the relay Un is de energized,the relay output contact R opens.



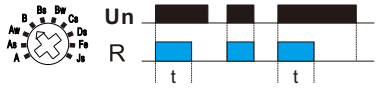
Aw:On delay (S trigger time accumulation)

When the relay Un is energized and the cumulative delay during the closing of S control signal reaches t,The output contact R is closed.



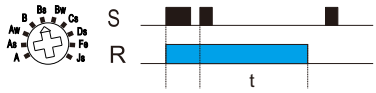
B:Interval (Power On)

When relay Un is powered on, the relay output contact R will be closed immediately and start delay. After delay t, the output contact R will be disconnected. If the delay time t does not arrive and relay Un is powered off, the output contact R will be disconnected, and the S control signal is invalid in this function mode.



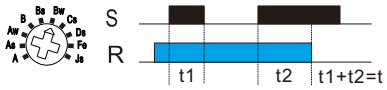
Bs:Off delay(S rising edge trigger start)

The relay Un is in the energized state. When the S control signal is connected, the output contact R of the relay is closed and starts to delay. After the delay t, the output contact R is disconnected. If the S control signal is connected again during the delay, the delay t is cleared and delayed again.



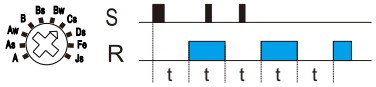
Bw:Off delay(S trigger time accumulation)

When the relay Us is powered on, the the output contact R is closed. When the cumulative delay during the closing of S control end reaches t,The output contact R is open.



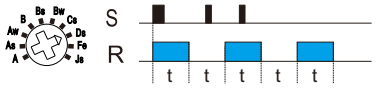
Cs:Repeat Cycle (Starting Off ,S rising edge start)

The relay Un is in the energized state. When the S control signal is closed, the relay starts to delay and is input after a delay time t,The output contact R is closed, and after the delay time t, the output contact R of the relay is disconnected, This cycle will repeat until relay Us is de energized.



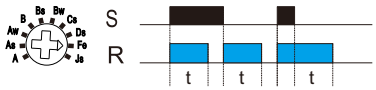
Ds:Repeat Cycle (Starting On ,S rising edge trigger start)

The relay Un is in the energized state. When the S control signal is closed, the relay output contact R closes and start delay, the output contact R is disconnected after delay t, and the relay output contact R is closed after delay t,This cycle will repeat until relay Us is de energized.



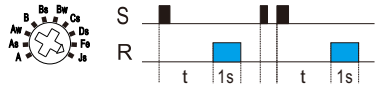
Fe:On and off delay (Triggered by rising and falling edges of S)

The relay Un is in the energized state. When the S control signal is connected, the output contact R closed and starts to delay, with a delay of t the output contact R open. When the S control signal is disconnected, the output contact is closed and starts to delay, with a delay of t the output contact R open.

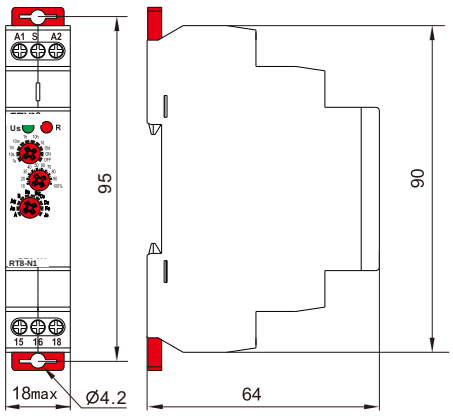


Js:Pulse output (Triggered by rising edge of S)

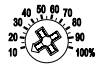
The relay Un is in the energized state. when the S control signal is connected, the relay starts to delay, with a delay of t, the relay output contact R is closed for 1 second and then the output contact R open.



Dimensions(mm)



Setting instructions

	Knob 1: delay gear setting, “s” for second, “m” for minute, “h” for hour, “d” for day, “ON” for relay action (15-18/25-28 closed), “OFF” for relay open (15-18/25-28 open).
	Knob 2: fine adjustment of delay time, 10% ~ 100% adjustable.

Delay time = knob 1 × knob 2.

Example 1: it needs to be set for 5 seconds. You can set knob 1 to 10s, knob 2 to 50%, and delay time = 10s × 50% = 5s.

Example 2: it needs to be set for 8 minutes. You can set knob 1 to 10m, knob 2 to 80%, and delay time = 10m × 80% = 8m.

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

Caution
The products must be installed by qualified electricians. All and any electrical connections of the product shall comply with the appropriate safety standards.