Kozuka™
MS.8 Series Modular Systems

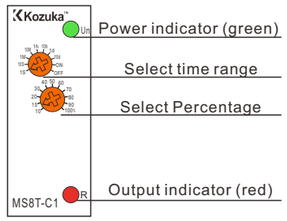
Time relay(Single Function) Operation Manual

MS8T-B1&B2&C1&C2

CE

MS8T-B1/C1

MS8T-B2/C2



General

Applications
- -Suitable for applications where function and time requirements are know.
- -Time switch , possible to be used for pump decay time after switching heating off , switching of fans.

Function Features
- -Single-function relay with possibility of time setting by a potentiometer.
- -Choice of 2 functions:
  B:Delay ON
  C:Delay OFF
- -Time scale 0.1 s - 10 days divided into 10 ranges.
- - Relay status is indicated by LED.
- - 1 Module,din rail mounting.

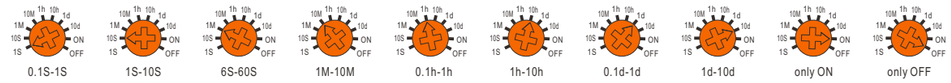
Model and connotation

MS8T – □ □/□
- Rated control supply voltage: W240:AC/DC12V-240V
- Number of contacts: 1:1× SPDT; 2:2× SPDT
- Function mode: B - Delay ON; C - Delay OFF
- MS8T Series

Technical parameters	MS8T-B1/C1	MS8T-B2/C2
Function	B : delay ON	C:delay OFF
Supply terminals	A1-A2	
Control supply voltage	AC/DC12-240V(50-60Hz)	
Burden	AC0.09-3VA/DC0.05-1.7W	
Voltage range	AC230V(50-60Hz)	
Power input	ACmax.6VA/1.3W	ACmax.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 coefficient	0.05%/℃,at=20℃(0.05%℉= at 68℉)	
Output	1×SPDT	2×SPDT
Current rating	1×5A（AC1）	2×5A（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℉ to131℉）	
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.1×2.5 or 2×1.5/with sleeve max.1×2.5(AWG 12)	
Dimensions	95.5×18×64mm	
Weight	1×SPDT:W240 62g	1×SPDT:W240 83g
Standards	EN 61812-1,IEC6947-5-1	

*The information above is subject to change at any time without notice.

Time Range



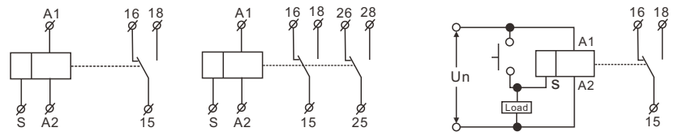
Functions Diagram

Time setting method

	Knob1: Setting of delay ear,s means seconds,m means minutes,h means hours,d means days,ON means relay works (15-18/25-28 closing),OFF means relay disconnected(15-18/25-28 breaking).
	Knob 2:Fine adjustment of delay time,adjustable from 10%~100%

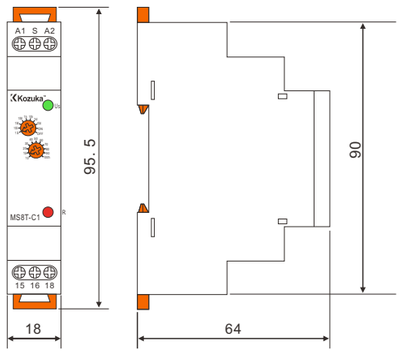
Delay time=knob 1×knob 2.
Example 1:It needs to be setfor 5 seconds,and the knob 1 can be set as 10s and the knob 2 as 50%.The delay time=10s×50%=5s.
Example 2:8 points need to be set.the knob 1 can be set to 10m,the knob 2 to 80%,and the delay yime=10m×80%=8m..

Wiring Diagram



PS.1.The control terminal S is activated by connection to A1 terminal via the external control contact S.
2.As shown, S-A2 can load (relay, lamp,contactor...) .the load still power on when S closed

Dimensions(mm)



Note.
The product shall be installed by a professional electrical worker.
Product wiring shall comply with relevant electrical safety standards.

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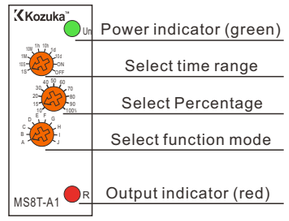
Kozuka™
MS.8 Series Modular Systems

Multi-function time relay MS8T-A1&A2
Operation Manual

MS8T-A1

MS8T-A2



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: - 5 time functions controlled by supply voltage
- 4 time functions controlled by control input
- 1 function of latching relay

-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

MS8T – A □/□

- Rated control supply voltage: W240:AC/DC12V-240V
- Number of contacts 1:1× SPDT 2:2× SPDT
- Function mode:
- MS8T Series

Technical parameters	MS8T-A1	MS8T-A2
Function	A,B,C,D,E,F,G,H,I,J	
Supply terminals	A1-A2	
Control supply voltage	AC/DC12-240V(50-60Hz)	
Burden	AC0.09-3VA/DC0.05-1.7W	
Voltage range	AC230V(50-60Hz)	
Power input	ACmax.6VA/1.3W	ACmax.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 coefficient	0.05%/℃,at=20℃(0.05%℉= at 68℉)	
Output	1×SPDT	2×SPDT
Current rating	1×5A（AC1）	2×5A（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.1×2.5 or 2×1.5/with sleeve max.1×2.5(AWG 12)	
Dimensions	95.5×18×64mm	
Weight	1×SPDT:W240 62g	2×SPDT:W240 83g
Standards	EN 61812-1,IEC6947-5-1	

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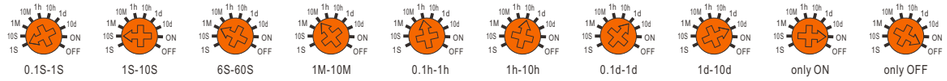
Time Range



Functions Diagram

A:On Delay (Power On)

When the input voltage U is applied, timing delay t begins. Relay contacts R change state after time delay is complete. Contacts R return to their shelf state when input voltage U is removed. Trigger switch is not used in this function.

B:Interval (Power On)

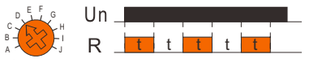
When input voltage U is applied, relay contacts R change state immediately and timing cycle begins. When time delay is complete, contacts return to shelf state. When input voltage U is removed, contacts will also return to their shelfstate. Trigger switch is not used in this function.

C:Repeat Cycle (Starting Off)

When input voltage U is applied, time delay t begins. When time delay t is complete, relay contacts R change state for time delay t. This cycle will repeat until input voltage U is removed. Trigger switch is not used in this function.

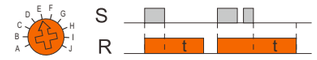
D:Repeat Cycle (Starting On)

When input voltage U is applied, relay contacts R change state immediately and time delay t begins. When time delay t is complete, contacts return to their shelf state for time delay t. This cycle will repeat until input voltage U is removed. Trigger switch is not used in this function.



E:Off Delay (S Break)

Input voltage U must be applied continuously. When trigger switch S is closed, relay contacts R change state. When trigger switch S is opened, delay t begins. When delay t is complete, contacts R return to their shelf state. If trigger switch S is closed before time delay t is complete, then time is reset. When trigger switch S is opened, the delay begins again, and relay contacts R remain in their energized state. If input voltage U is removed, relay contacts R return to their shelf state.

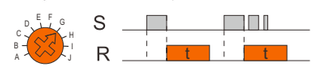


F:Single Shot

Upon application of input voltage U, the relay is ready to accept trigger signal S. Upon application of the trigger signal S, the relay contacts R transfer and the preset time t begins. During time-out, the trigger signal S is ignored. The relay resets by applying the trigger switch S when the relay is not energized.

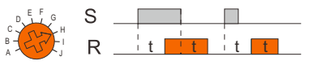
G:Single Shot Trailing Edge (Non-Retriggerable)

Upon application of input voltage U, the relay is ready to accept trigger signal S. Upon application of the trigger signal S, the relay contacts R transfer and the preset time t begins. At the end of the preset time t, the relay contacts R return to their normal condition unless the trigger switch S is opened and closed prior to time out t (before preset time elapses). Continuous cycling of the trigger switch S at a rate faster than the preset time will cause the relay contacts R to remain closed. If input voltage U is removed, relay contacts R return to their shelf state



H:On/Off Delay

Input voltage U must be applied continuously. When trigger switch S is closed, time delay t begins. When time delay t is complete, relay contacts R change state and remain transferred until trigger switch S is opened. If input voltage U is removed, relay contacts R return to their shelf state.

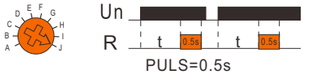


I:Latching relay

Input voltage U must be applied continuously. Output changes state with every trigger switch S closure. If input voltage U is removed, relay contacts R return to their shelf state.

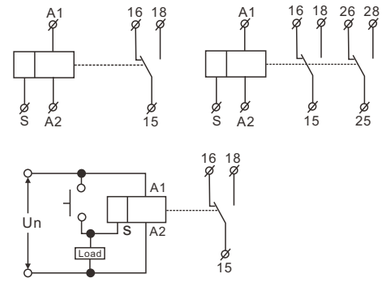
J:Pulse generator

Upon application of input voltage U, a single output pulse of 0.5 seconds is delivered to relay after time delay t. Power must be removed and re-applied to repeat pulse. Trigger switch is not used in this function.



PULS=0.5s

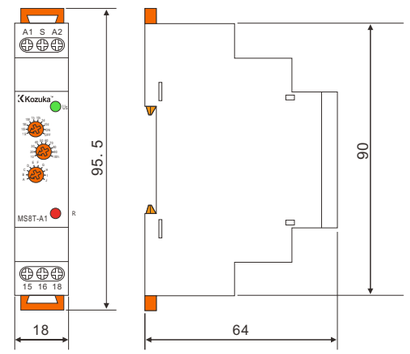
Wiring Diagram



PS.1.The control terminal S is activated by connection to A1 terminal via the external control contact S.

2.As shown, S-A2 can load (relay, lamp,contactor...) .the load still power on when S closed

Dimensions(mm)



Note.
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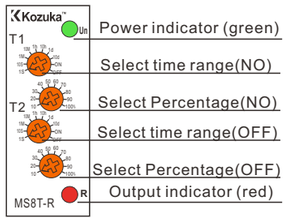
Kozuka™
MS.8 Series Modular Systems

Asymmetric cycler Operation Manual

MS8T-R1&R2

MS8T-R1

MS8T-R2



General

Applications

- MS8T-R used for regular room ventilation,cyclic dehumidification,light control, circulating pumps,noon signs,etc.

Function Features

- 2 time functions:
  - Cycler beginning with pulse
  - Cycler beginning with pause
- Function choice is done by an external jumper of terminals S-A1.
- Time scale 0.1s-100days divided into 10 time ranges:
  (0.1s-1s/1s-10s/0.1m-1m/1m-10m/0.1h-1h/1h-10h/0.1d-1d/1d-10d/3d-30d/10d-100d)
- Relay status is indicated by LED.
- 1 Module, din rail mounting.

Model and connotation

MS8T – R □/□

- Rated control supply voltage: W240:AC/DC12V-240V
- Number of contacts: 1:1× SPDT, 2:2× SPDT
- Asymmetric cycler
- MS8T Series

Technical parameters	MS8T-R1	MS8T-R2
Function	Asymmetric cycler time relay	
Supply terminals	A1-A2	
Control supply voltage	AC/DC12-240V(50-60Hz)	
Burden	AC0.7-3VAC/DC0.5-1.7W	
Voltage range	AC230V(50-60Hz)	
Power input	ACmax.12VA/1.3W	ACmax.12VA/1.9W
Supply voltage tolerance	-15%;+10%	
Supply indication	green LED	
Time ranges	0.1s-100days	
Time setting	potentionmeter	
Time deviation	10%-mechanical setting	
Repeat accuracy	0.2%-set value stability	
Temperature coefficient	0.05%/℃,at=20℃(0.05%℉= at 68℉)	
Output	1×SPDT	2×SPDT
Current rating	1×5A(AC1)	2×5A(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℉to131℉)	
Storage temperature	-35℃ to+75℃ (-22℉to158℉)	
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.1×2.5 or 2×1.5/with sleeve max.1×2.5(AWG 12)	
Dimensions	95.5×18×64mm	
Weight	1×SPDT:W240 62g	1×SPDT:W240 83g
Standards	EN 61812-1,EN61010-1	

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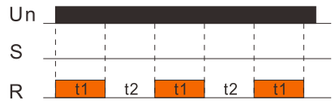
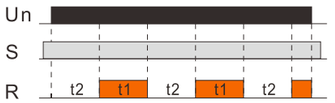
Functions Diagram

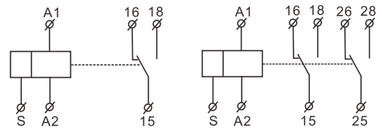
Cycler beginning with pulse

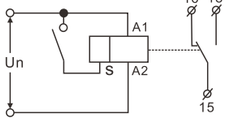


Cycler beginning with pulse(jumper A1-S)



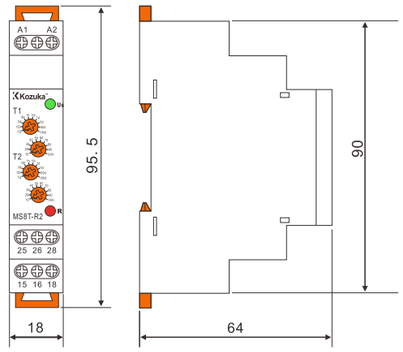
Wiring Diagram





PS.As shown, S-A2 can load (relay, lamp,contactor…) .the load still power on when S closed

Dimensions(mm)



Note.
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Product wiring shall comply with relevant electrical safety standards.

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Kozuka™
MS.8 Series Modular Systems

Floatless Level Relay
Operation Manual

MS8FL-B1

MS8FL-B1

General

Applications
- MS8FL-B1 for control of ordinary purified water or sewage water, such as water tank, water pond, water pool etc.

Function Features
- Realization of wide range of wide range of power supply: AC/DC24-240V 50/60Hz
- Relay status is indicated by LED.
- 1-MODULE 18mm, DIN rail mounting.

Model and connotation

MS8FL – □
- Output:
- MS8 Series Intermediate Relay

Technical parameters	MS8FL-B1
Supply terminals	A1-A2
Voltage range	AC/DC24-240V (50-60Hz)
Burden	max. 2VA
Time ranges	-15%; +10%
Interelectrode voltage	max. AC10V
Interelectrode current	AC<0.1mA
Response time	max. 400ms
Cable length	max.100m
Output	1 x SPDT
	5A/AC1
	250VAC/24VDC
Min. breaking capacity DC	500mW
Output indication	red LED
Mechanical life	1 x 10^7
Electrical life (AC1)	1 x10^6
Operating temperature	-20°C to +55°C (-4°F to 131°F)
Storage temperature	-35°C to +75°C (-22°F to 167°F)
Mounting/DIN rail	DIN rail EN/IEC 60715
Protection degree	IP20
Operating position	any
Pollution degree	2
Max. cable (size) mm^2	solid wire max. 1 x 2.5 or 2 x 1.5/with sleeve max. 1 x 2.5 (AWG 12)
Dimensions	95.5mm x 18mm x 64mm
Weight	W240-96g, A230-95g

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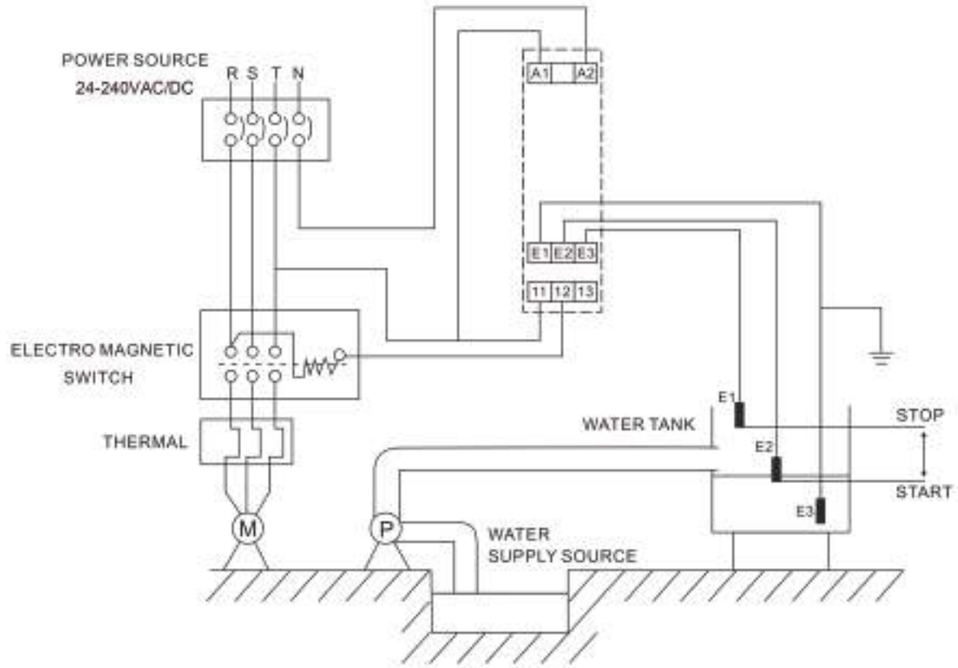
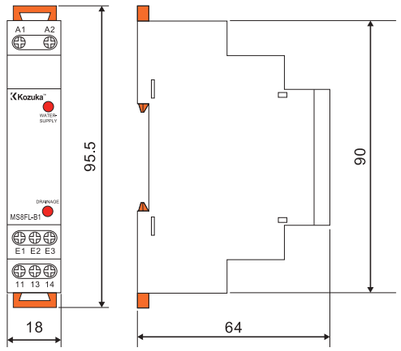
Wiring Diagram



Dimensions (mm)



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