

Digital display time relay

CDT6-X

Operation instructions



Overview

●Application

-The multifunctional time relay can be used in industrial equipment, lighting control, heating element control, motor and fan control with 20 delay modes, covering a delay range of 0.1 seconds to 99 days.

●Characteristic

-20 delay modes: 5 delay modes controlled by power supply
13 delay modes controlled by signals
ON, OFF mode

-Ultra wide delay range, can be set from 0.1 seconds to 99 days.

-Available in AC/DC12V-240V ultra wide working voltage specifications.

-The working status of the relay is indicated by LED indicator lights.

-Ultra small volume, only 18mm wide, installed with a 35mm caliper.

●Model and its meaning

CDT6 - X ☐ ☐ ☐

Rated working power supply voltage

M:AC220V W:AC/DC12V-240V

Output contact 10: Output contact 10A 16: Output contact 16A

Function code 1: 1 group conversion 2: 2 groups conversion

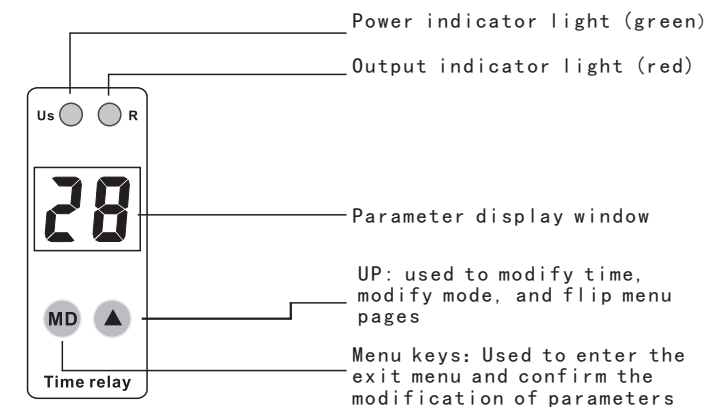
Digital display type

CDT6 series time relay

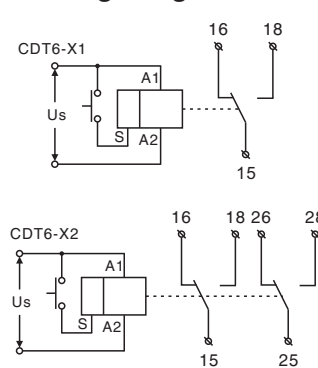
Technical Parameter

		CDT6-X1	CDT6-X2
Function		20 functional modes	
Power terminal		A1 - A2	
Rated supply voltage	W	AC/DC 12-240V (50-60Hz)	
	M	AC 220V (50-60Hz)	
Power consumption	W	AC 0.09-3VA/DC 0.05-1.7W	
	M	AC max.6VA/1.9W	
Power fluctuation range		-15%; +10%	
Power indicator light		Green LED	
Delay range		0.1s-99 day	
Setting method		Key settings	
Setting accuracy		2%	
Repeatability		0.2%	
Temperature fluctuation error		0.05%°C, at=20°C	
Output contact parameters	Number	1×SPDT	2×SPDT
	10A	1×10A 250VAC/24VDC	2×10A 250VAC/24VDC
	16A	1×16A 250VAC/24VDC	2×16A 250VAC/24VDC
Minimum switching power		500mW	
Output relay indication		Red LED	
mechanical life		1×10 ⁷	
Electrical lifespan (resistive load)		1×10 ⁵	
Reset time		max 200ms	
Ambient Temperature		-20°C ~ +55°C	
Installation method		35mm rail installation	
Installation altitude		≤2000m	
Wiring capability		1×2.5mm ² or 2×1.5mm ² 0.4N·m	
Dimension		90mm × 18mm × 65mm	
Weight		67g	80g
Compliant with standards		GB/T 14048.5, IEC60947-5-1, EN 61812-1	

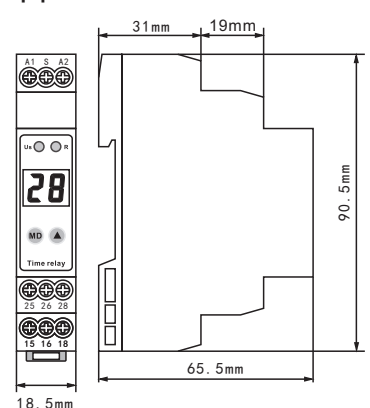
Panel diagram



Wiring diagram



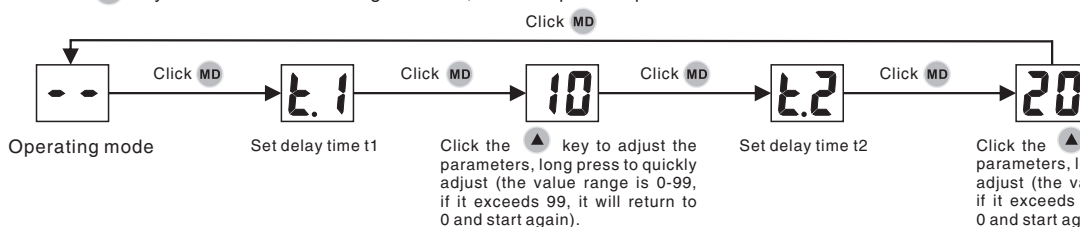
Appearance and size



Setting instructions

Delay time setting:

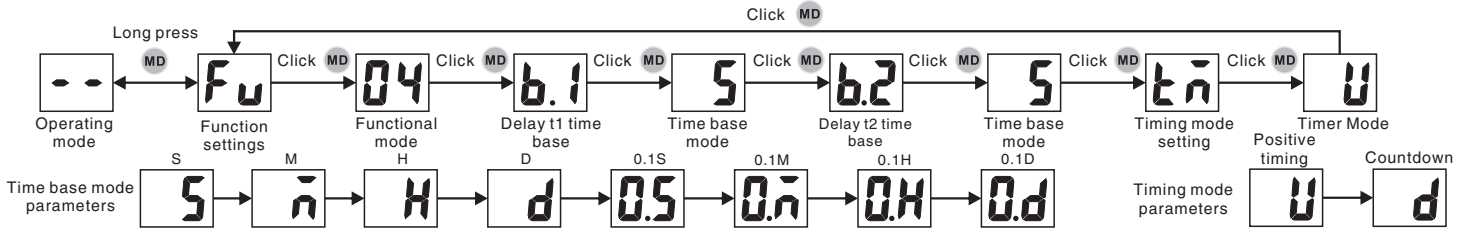
Click the MD key to enter the time setting interface, and the specific operation is as follows:



Note: When there is no operation on the operation interface for 60 seconds, it will automatically exit the settings interface.

Function set

Long press the **MD** key for 3 seconds to enter the function mode setting interface. The specific operation is as follows:

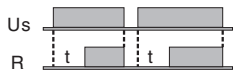


Note: Short press the **▲** key to modify the time base mode and timing mode. Long press the **MD** key for three seconds to exit and save the settings. When there is no operation for 60 seconds on the operation interface, it will automatically exit the settings interface.

Function diagram

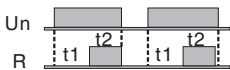
01: Power on delay

After the instrument U_s is powered on, the relay starts to delay timing. After a delay of t_1 time, the output contact continues to close until U_s loses power and opens. When U_s is powered on again and delays again, the S control signal will not take effect in this mode.



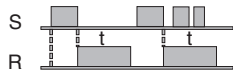
05: Pulse output

When the instrument U_s is powered on, it starts to delay. After a delay of t_1 , the output contact closes. After a delay of t_2 , the output contact closes and opens. After restarting the instrument, the delay is repeated.



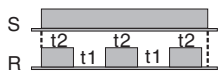
09: S falling edge closed, delayed disconnection

When the instrument U_s is powered on, the output contacts of the instrument will not close and will not delay. When the S control end is connected and then disconnected, the output contacts will close and start delaying. When the delay time is t , it will open. If the S control end is connected again after the delay time t , it will not delay again.



13: Loop delay (ON start)

When the instrument U_s is powered on, the relay at the S control end immediately closes and begins to delay. After a delay of t_1 time, the output contact opens. At the same time, after a delay of t_2 time, the relay output contact closes. Repeat this cycle of delay until the S control end opens.



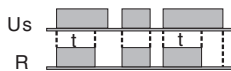
17: Delayed start through external control

After the instrument U_s is powered on, the S control terminal is connected and delayed. After a delay of t time, the output contact is closed and held, and the S control terminal cannot be triggered again. After restarting the instrument, the relay is disconnected.



02: Delayed disconnection

When the instrument U_s is powered on, the relay output contact immediately closes and begins to delay. When the delay time reaches t , the output contact opens. If the delay time does not reach t and the power is lost, the output contact opens, and the S control signal will not take effect in this mode.



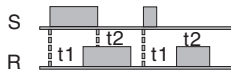
06: Power on delay through external control

After the instrument U_s is powered on, the delay starts when the S control terminal is connected. After a delay of t time, the output contact closes. When the output contact closes, the output contact opens when the S control terminal is disconnected.



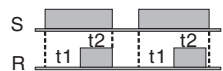
10: On/Off Delay

When the instrument U_s is powered on, the output contacts of the instrument will not close and will not delay. When the S control end is connected, the delay starts. After a delay of t time, the output contacts close. If the S control end remains connected, it will not close until the S control end is disconnected. After a delay of t time, the output contacts will open.



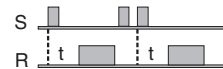
14: Pulse output through external control

After the instrument U_s is powered on, the S control terminal is connected and starts to delay. After a delay of t_1 , the output contact closes. After a delay of t_2 , the output contact closes and opens. After restarting the instrument, the delay is resumed.



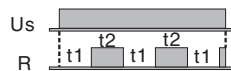
18: Delayed start through external control

When the instrument U_s is powered on, the S control end triggers a delay. After a delay of t time, the output contact closes, and the S control end triggers again. The relay opens and begins to delay, and the output contact closes after a delay of t time. When the instrument U_s is powered off, the relay opens.



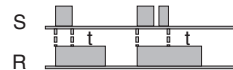
03: Loop delay (OFF start)

When the instrument U_s is powered on, the relay starts to delay. After a delay of t_1 time, the output contact closes. At the same time, after a further delay of t_2 time, the relay output contact opens. This cycle of delay continues until the instrument U_s loses power, and the S control signal will not take effect in this function.



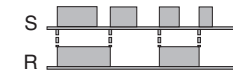
07: Delayed disconnection (triggered by the falling edge of S)

When the instrument U_s is powered on, the output contacts of the instrument will not close and will not delay. When the S control end is connected, the output contacts will close. When the S control end is disconnected, a delay will begin. If it is disconnected after a delay of t time and the S control end is connected again after a delay of t time, the delay will be re delayed.



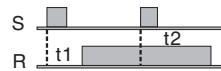
11: Pulse conversion

When the instrument U_s is powered on, the output contacts of the instrument will not close. When the S control terminal is connected, the status of the output contacts will be converted.



15: Delayed start stop through external control

When the instrument U_s is powered on, the S control terminal triggers a delay. After a delay of t_1 time, the output contact closes. When the S control terminal is triggered again, the relay opens after a further delay of t_2 time.



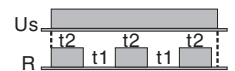
19: Always closed

When the instrument U_s is powered on, the relay is in a closed state, and when the instrument U_s is powered off, the relay is in a disconnected state.



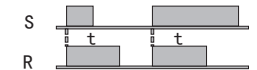
04: Loop delay (ON start)

When the instrument U_s is powered on, the relay immediately closes and begins to delay. After a delay of t_1 time, the output contact opens. At the same time, after a further delay of t_2 time, the relay output contact closes. This cycle of delay continues until the relay U_s loses power, and the S control signal will not take effect in this functional mode.



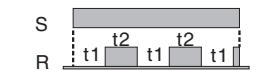
08: Delayed disconnection (triggered by the rising edge of S)

When the instrument U_s is powered on, the output contacts of the instrument will not close and will not delay. When the S control end is connected, the output contacts will close and start to delay. When the delay time is t , it will open. If the S control end is connected again after the delay time t , it will not delay again.



12: Loop delay through external control (starting from OFF)

When the instrument U_s is powered on, the relay at the S control end starts to delay. After a delay of t_1 time, the output contact closes. At the same time, after a further delay of t_2 time, the relay output contact opens. This cycle of delay continues until the S control end of the instrument is disconnected.



16: Delayed start stop through external control

After the instrument U_s is powered on, the relay closes and begins to delay after the S control end is connected. After a delay of t_1 time, the output contact opens. When the S control end is disconnected, the relay closes again. After a delay of t_2 time, the relay opens. When the S control section is connected for no more than t_1 time, the relay closes after a delay of t_1+t_2 time.



20: Always disconnected

When the instrument U_s are powered on or powered off, the relays are disconnected.



warn

1. When using machines that have a significant impact on human life and property (such as nuclear power control, medical equipment, ships, vehicles and railways, aviation, combustion equipment, safety devices, anti-theft/disaster prevention devices, etc.), double safety protection devices need to be installed before use, otherwise it may cause fire, personal injury or property damage.
2. Do not perform maintenance work while powered on, as there is a risk of electric shock.
3. Please confirm the terminal number before wiring, otherwise it may cause a fire.
4. Except for our company's maintenance personnel, this product must not be modified, otherwise electric shock or fire may occur.

Note

1. Do not use this product outdoors, as it may shorten its service life or cause electric shock accidents.
2. Please use a load smaller than the allowable capacity of the relay contacts, otherwise it may cause poor insulation, poor contact adhesion, relay damage, fire, etc.
3. Avoid using this product in places that are flammable, explosive, humid, exposed to direct sunlight, heat radiation, vibration, etc. Otherwise, it may cause fires or explosions.
6. Do not allow dust or cable residue to enter the interior of the product, otherwise it may cause fire or product malfunction.
- To achieve the purpose of strengthening insulation, please use power devices that can ensure basic insulation above.