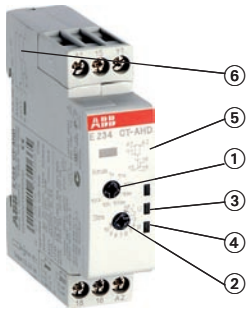


Electronic timer CT-AHD.12

OFF-delayed with 1 c/o contact

Data sheet

20DC 251 094 F0106



- ① Rotary switch for the preselection of the time range
- ② Potentiometer with direct reading scale for the fine adjustment of the time delay
- ③ U: green LED -
┌───┐
control supply voltage applied
└───┘
timing
- ④ R: yellow LED -
┌───┐
output relay energized
- ⑤ Circuit diagram
- ⑥ Function diagram

Features

- Rated control supply voltage 24-48 V DC, 24-240 V AC
- Single-function timer OFF-delay
- 7 time ranges (0.05 s - 100 h) in one device
- 1 c/o contact (250 V / 6 A)
- Control input: voltage-related triggering, polarized, capable of switching a parallel load
- 2 LEDs for status indication
- Width of only 17.5 mm
- Light-grey enclosure in RAL 7035

Approvals

- UL 508, CAN/CSA C22.2 No.14
- GOST
- CB scheme
- CCC

Marks

- CE CE
- C-Tick C-Tick

Order data

Type	Rated control supply voltage	Time range	Output	Control input	Order code
CT-AHD.12	24-48 V DC, 24-240 V AC	0.05 s - 100 h	1 c/o contact	voltage-related triggering	1SVR 500 110 R0000

Application

With their structural form and their width of 17.5 mm only, the CT-D range timers are ideally suited for installation in distribution cabinets.

Operating mode

The CT-AHD.12 with 1 c/o contact and offers 7 time ranges, from 0.05 s to 100 h. The time delay range is rotary switch selectable on the front of the unit. The fine adjustment of the time delay is made via an internal potentiometer, with a direct reading scale, on the front of the unit.

Electronic timer CT-AHD.12

OFF-delayed with 1 c/o contact

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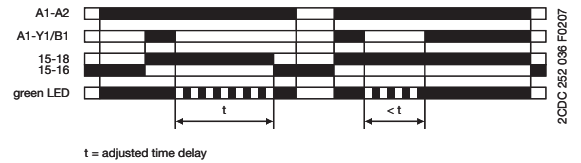
Function diagram(s)

OFF-delay with auxiliary voltage

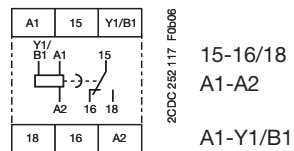
This function requires continuous control supply voltage for timing.

If control input **A1-Y1/B1** is closed, the output relay energizes immediately. If control input **A1-Y1/B1** is opened, the time delay starts. The green LED flashes during timing. When the selected time delay is complete, the output relay de-energizes and the flashing green LED turns steady.

If control input **A1-Y1/B1** recloses before the time delay is complete, the time delay is reset and the output relay does not change state. Timing starts again when control input **A1-Y1/B1** re-opens. If control supply voltage is interrupted, the output relay de-energizes and the time delay is reset.



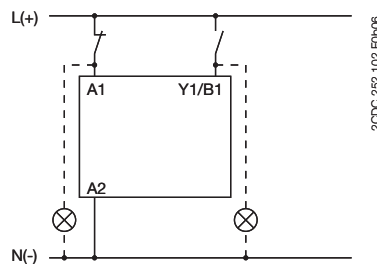
Connection diagram(s)



1. c/o contact
 Rated control supply voltage U_s
 24-48 V DC or 24-240 V AC
 Control input

Wiring instructions

Parallel load to control input possible / allowed






Electronic timer CT-AHD.12

OFF-delayed with 1 c/o contact

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Technical data

Data at $T_a = 25\text{ °C}$ and rated values, if nothing else indicated

Input circuits - Supply circuit		1SVR 500 110 R0000		
Rated control supply voltage U_s	A1-A2	24-240 V AC		
	A1-A2	24-48 V DC		
Rated control supply voltage tolerance	24-240 V AC	-15...+10 %		
	24-48 V DC	-15...+10 %		
Typical current / power consumption		24 V DC	230 V AC	115 V AC
	24-48 V DC	13.58 mA / -	- / -	- / -
	24-240 V AC	- / -	60.91 mA / -	48.50 mA / -
Rated frequency	DC; 50/60 Hz			
Frequency range AC	47-63 Hz			
Power failure buffering time	min. 20 ms			
Input circuits - Control circuit		1SVR 500 110 R0000		
Control input, control function	A1-Y1/B1	start timing external		
Kind of triggering	voltage-related triggering			
Resistance to reverse polarity	yes			
Polarized	yes			
Capable of switching a parallel load	yes			
Maximum cable length to the control inputs	50 m - 100 pF/m			
Minimum control pulse length	30 ms			
Control voltage potential	see rated control supply voltage U_s			
Current consumption of the control input	24 V DC	3.72 mA		
	230 V AC	23.81 mA		
	115 V AC	21.64 mA		
Timing circuit		1SVR 500 110 R0000		
Kind of timer	Single-function timer	OFF-delay with auxiliary voltage		
Time ranges 0.05 s - 100 h	0.05-1 s, 0.5-10 s, 5-100 s, 0.5-10 min, 5-100 min, 0.5-10 h, 5-100 h			
Recovery time	< 50 ms			
Accuracy within the rated control supply voltage tolerance	$\Delta t < 0.005\ %/V$			
Accuracy within the temperature range	$\Delta t < 0.06\ %/^{\circ}C$			
Indication of operational states		1SVR 500 110 R0000		
Control supply voltage / timing	U: green LED	 : control supply voltage applied		
Control supply voltage / timing	U: green LED	 : timing		
Relay status	R: yellow LED	 : output relay energized		
Output circuits		1SVR 500 110 R0000		
Kind of output	15-16/18	Relay, 1. c/o contact		
Contact material	Cd-free			
Rated operational voltage U_e	250 V			
Derating				
Minimum switching voltage / Minimum switching current	12 V / 100 mA			

Electronic timer CT-AHD.12

OFF-delayed with 1 c/o contact

Data sheet

Output circuits		1SVR 500 110 R0000
Maximum switching voltage / Minimum switching current		see load limit curve / see load limit curve
Rated operational current I_o (IEC 60947-5-1)	AC12 (resistive) at 230 V	6 A
	AC15 (inductive) at 230 V	3 A
	DC12 (resistive) at 24 V	6 A
	DC13 (inductive) at 24 V	2 A
Mechanical lifetime		30 x 10 ⁶ switching cycles
Electrical lifetime		0.1 x 10 ⁶ switching cycles (AC12, 230 V, 4 A)
Short-circuit resistance, maximum fuse rating (IEC/EN 60947-5-1)	n/c contact	6 A fast-acting
	n/o contact	10 A fast-acting
General data		1SVR 500 110 R0000
Duty time		100 %
Repeat accuracy (constant parameters)		$\Delta t < \pm 0.5$ %
Dimensions (W x H x D)		17.5 x 70 x 58 mm (0.69 x 2.76 x 2.28 inches)
Weight		approx. 60 g (approx. 0.13 lb)
Mounting position		any
Minimum distance to other units normal operation mode	horizontal	none
	vertical	none
Mounting		DIN rail (EN 60715), snap-on mounting without any tool
Degree of protection enclosure / terminals		IP50 / IP20
Electrical connection		1SVR 500 110 R0000
all circuits		Screw connection
Wire size	fine-strand with wire end ferrule	2 x 0.5-1.5 mm ² / 1 x 0.5-2.5 mm ² (2 x 20-16 AWG) / (1 x 20-14 AWG)
	fine-strand without wire end ferrule	2 x 0.5-1.5 mm ² / 1 x 0.5-2.5 mm ² (2 x 20-16 AWG) / (1 x 20-14 AWG)
	rigid	2 x 0.5-1.5 mm ² / 1 x 0.5-4 mm ² (2 x 20-16 AWG) / (1 x 20-12 AWG)
Stripping length		7 mm (0.28 inches)
Tightening torque		0.5-0.8 Nm
Environmental data		1SVR 500 110 R0000
Ambient temperature range	operation	-20...+60 °C
	storage	-40...+85 °C
Damp heat, cyclic (IEC/EN 60068-2-30)		6 x 24 h cycles, 55 °C, 95 % RH
Vibration, sinusoidal (IEC/EN 60068-2-6)		4 m/s ² , 20 cycles, 10...150...10 Hz
Shock, half-sine (IEC/EN 60068-2-27)		100 m/s ² , 11 ms
Isolation data		1SVR 500 110 R0000
Rated isolation voltage U_i	Output circuit 1 / Output circuit 2	300 V
	Input circuit / Output circuit	300 V
Rated impulse withstand voltage U_{imp} (type test) (IEC/EN 60664-1, VDE 0110)		4 kV; 1.2/50 μ s

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Isolation data		1SVR 500 110 R0000
Power-frequency withstand voltage test (Test voltage, routine test)	between all isolated circuits	2.5 kV, 50 Hz, 1 s
Basic insulation (IEC/EN 61140)	Input circuit / Output circuit	300 V
Protective separation (IEC/EN 61140, VDE 0106 part 101 and part 101/A1)	Input circuit / Output circuit	250 V
Pollution degree (IEC/EN 60664-1, VDE 0110, UL 508)		3
Overvoltage category (IEC/EN 60664-1, VDE 0110, UL 508)		III
Standards / Directives		1SVR 500 110 R0000
Product standard		IEC 61812-1, EN 61812-1 + A11, DIN VDE 0435 part 2021
EMC Directive		2004/108/EC
Low Voltage Directive		2006/95/EC
RoHS Directive		2002/95/EC
Electromagnetic compatibility		1SVR 500 110 R0000
Interference immunity		IEC/EN 61000-6-1 IEC/EN 61000-6-2
electrostatic discharge (ESD)	IEC/EN 61000-4-2	Level 3 (6 kV / 8 kV)
electromagnetic field (HF radiation resistance)	IEC/EN 61000-4-3	Level 3 (10 V/m)
fast transients (Burst)	IEC/EN 61000-4-4	Level 3 (2 kV / 5 kHz)
powerful impulses (Surge)	IEC/EN 61000-4-5	Level 4 (2 kV L-L)
HF line emission	IEC/EN 61000-4-6	Level 3 (10 V)
Interference emission		IEC/EN 61000-6-3 IEC/EN 61000-6-4
electromagnetic field (HF radiation resistance)	IEC/CISPR 22, EN 55022	Class B
HF line emission	IEC/CISPR 22, EN 55022	Class B

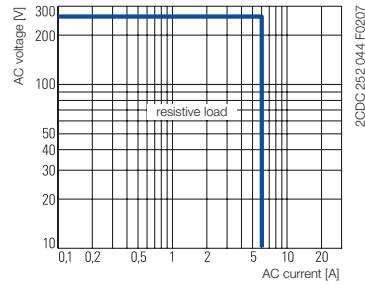
Electronic timer CT-AHD.12

OFF-delayed with 1 c/o contact

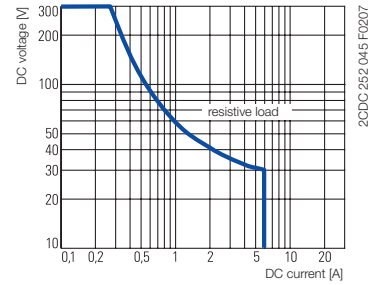
Data sheet

Technical diagrams

Load limit curve

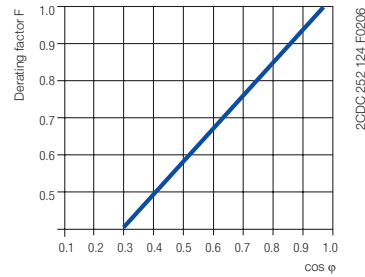


AC load (resistive)



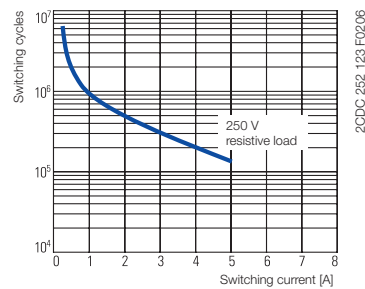
DC load (resistive)

Derating factor F



for inductive AC load

Contact lifetime



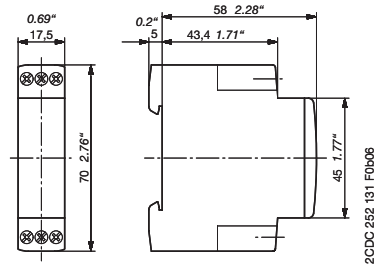
Electronic timer CT-AHD.12

OFF-delayed with 1 c/o contact

Data sheet

Dimensions

in mm



CT-AHD.12

Synonyms

Used expression	Alternative expression(s)	Used expression	Alternative expression(s)
1 c/o contact	1 SPDT	voltage-related	wet / non-floating

Further Documentation

Document title	Document type	Document number
Electronic Products and Relays	Technical catalogue	2CDC 110 004 C020x

You can find the documentation in the internet under www.abb.com/lowvoltage → Control Products → ...



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