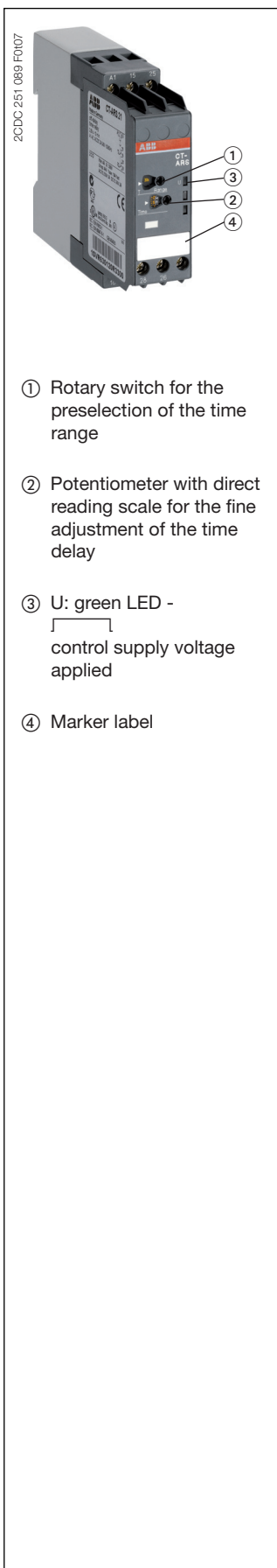


# Electronic timer CT-ARS.21

OFF-delayed without auxiliary voltage with 2 c/o contacts

## Data sheet



- 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
- ④ Marker label

### Features

- Rated control supply voltage 24-240 V AC/DC
- Single-function OFF-delay timer without auxiliary voltage
- One device includes 7 time ranges (0.05 s - 10 min)
- 2 c/o (SPDT) contacts
- 1 LED for status indication
- Width of 22.5 mm
- Sealable transparent cover (optional accessory) for protection against unauthorized changes of time values
- Integrated marker label

### Approvals

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

### Marks

- CE CE
- C-Tick

### Order data

Type	Rated control supply voltage	Time range	Output	Order code
CT-ARS.21	24-240 V AC/DC	0.05 s - 10 min	2 c/o (SPDT) contacts	1SVR 630 120 R3300

### Order data - Accessories

#### Adapter for screw mounting on panel

Type	Width in mm	Order code
ADP.01	22.5	1SVR 430 029 R0100

#### Sealable transparent cover

Type	Width in mm	Order code
COV.01	22.5	1SVR 430 005 R0100

#### Marker label

Type	Width in mm	Order code
MAR.01	22.5	1SVR 366 017 R0100

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### Application

The CT-S range timers are designed for use in industrial applications. They operate over an universal range of supply voltages and a large time delay range, within compact dimensions. The easy-to-set front-face potentiometers, with direct reading scales, provide accurate time delay adjustment.

### Operating mode

The CT-ARS.21 with 2 c/o contacts offers 7 time ranges, from 0.05 s - 10 min, for the adjustment of the time delay. The time delay range is rotary switch selectable. The fine adjustment of the time delay is made via an internal potentiometer, with a direct reading scale, on the front of the unit.

### Function diagram(s)

#### Remarks

#### Legend:

- Control supply voltage not applied / Output contact open
- Control supply voltage applied / Output contact closed

#### Terminal designations on the device and in the diagrams:

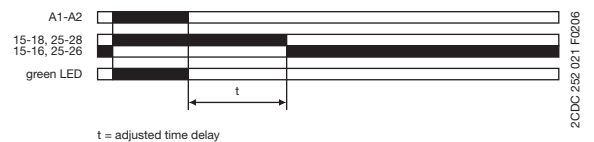
The 1st c/o contact is designated 15-16/18. The 2nd c/o contact is designated 25-26/28. Control supply voltage is applied to terminals A1-A2.

#### OFF-delay without auxiliary voltage

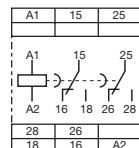
The OFF-delay function without auxiliary voltage does not require continuous control supply voltage for timing. Prior to first commissioning and after a six-month stop in operation, a formatting time of 5 minutes is necessary.

Applying control supply voltage energizes the output relay immediately. Applied control supply voltage is displayed by the glowing green LED. If control supply voltage is interrupted, the OFF-delay starts and the LED turns off. When timing is complete, the output relay de-energizes.

For correct operation of the unit, it is necessary to complete the minimum energizing time.



### Connection diagram(s)



2CDC 252 015 F0206

15-16/18  
25-26/28  
A1-A2

1. c/o (SPDT) contact  
2. c/o (SPDT) contact  
Rated control supply voltage  $U_s$   
24-240 V AC/DC

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## Technical data

Data at  $T_a = 25\text{ °C}$  and rated values, unless otherwise indicated

<b>Input circuits - Supply circuit</b>		1SVR 630 120 R3300		
Rated control supply voltage $U_s$	A1-A2	24-240 V AC/DC		
Rated control supply voltage tolerance	24-240 V AC/DC	-15...+10 %		
Typical current / power consumption	24-240 V AC/DC	24 V DC	230 V AC	115 V AC
		1 mA / -	3.1 mA / -	2.5 mA / -
Rated frequency		DC; 50/60 Hz		
Frequency range AC		47-63 Hz		
<b>Timing circuit</b>		1SVR 630 120 R3300		
Kind of timer	Single-function timer	OFF-delay without auxiliary voltage		
Time ranges 0.05 s - 10 min		0.05-1 s, 0.15-3 s, 0.5-10 s, 1.5-30 s, 5-100 s, 15-300 s, 0.5-10 min		
Recovery time		< 50 ms		
Repeat accuracy (constant parameters)		$\Delta t \pm 0.2\%$		
Accuracy within the rated control supply voltage tolerance		$\Delta t < 0.004\%/V$		
Accuracy within the temperature range		$\Delta t < 0.03\%/^{\circ}\text{C}$		
Formatting time (prior to 1st commissioning and after a six-month stop in operation)		5 min		
Minimum duty time		100 ms		
<b>Indication of operational states</b>		1SVR 630 120 R3300		
Control supply voltage	U: green LED	┌ ┐ l: control supply voltage applied		
<b>Output circuits</b>		1SVR 630 120 R3300		
Kind of output	15-16/18	Relay, 1. c/o (SPDT) contact		
	25-26/28	Relay, 2. c/o (SPDT) contact		
Contact material		Cd-free		
Rated operational voltage $U_e$		250 V		
Minimum switching voltage / Minimum switching current		12 V / 10 mA		
Maximum switching voltage / Minimum switching current		see load limit curves / see load limit curves		
Rated operational current $I_e$ (IEC/EN 60947-5-1)	AC12 (resistive) at 230 V	4 A		
	AC15 (inductive) at 230 V	3 A		
	DC12 (resistive) at 24 V	4 A		
	DC13 (inductive) at 24 V	1.5 A		
AC rating (UL 508)	Utilization category (Control Circuit Rating Code)	B 300		
	max. rated operational voltage	300 V AC		
	max. continuous thermal current at B 300	5 A		
	max. making / breaking apparent power at B 300	3600/360 VA		
Mechanical lifetime		30 x 10 <sup>6</sup> switching cycles		
Electrical lifetime		0.1 x 10 <sup>6</sup> switching cycles (AC12, 230 V, 4 A)		
Maximum fuse rating to achieve short-circuit protection (IEC/EN 60947-5-1)	n/c contact	6 A fast-acting		
	n/o contact	10 A fast-acting		

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General data		1SVR 630 120 R3300
Duty time		100 %
Dimensions (W x H x D)		22.5 x 78 x 100 mm (0.89 x 3.07 x 3.94 inches)
Weight		0.137 kg (0.3 lb)
Mounting position		any
Minimum distance to other units		
normal operation mode	horizontal	none
	vertical	none
Mounting		DIN rail (IEC/EN 60715), snap-on mounting without any tool
Degree of protection enclosure / terminals		IP50 / IP20
Electrical connection		1SVR 630 120 R3300
all circuits		Screw connection
Wire size	fine-strand with wire end ferrule	2 x 0.75-2.5 mm <sup>2</sup> (2 x 18-14 AWG)
	fine-strand without wire end ferrule	2 x 0.75-2.5 mm <sup>2</sup> (2 x 18-14 AWG)
	rigid	2 x 0.5-4 mm <sup>2</sup> (2 x 20-12 AWG)
Stripping length		7 mm (0.28 inches)
Tightening torque		0.6-0.8 Nm
Environmental data		1SVR 630 120 R3300
Ambient temperature range	operation	-25...+60 °C
	storage	-40...+85 °C
Damp heat, cyclic (IEC/EN 60068-2-30)		6 x 24 h cycle, 55 °C, 95 % RH
Vibration, sinusoidal (IEC/EN 60068-2-6)	functioning	40 m/s <sup>2</sup> , 10-58/60-150 Hz
	resistance	60 m/s <sup>2</sup> , 10-58/60-150 Hz, 20 cycles
Vibration, seismic (IEC/EN 60068-3-3)	functioning	20 m/s <sup>2</sup>
Shock, half-sine (IEC/EN 60068-2-27)	functioning	100 m/s <sup>2</sup> , 11 ms, 3 shocks/direction
	resistance	300 m/s <sup>2</sup> , 11 ms, 3 shocks/direction
Isolation data		1SVR 630 120 R3300
Rated insulation voltage U <sub>i</sub>	output circuit 1 / output circuit 2	300 V
	input circuit / output circuit	500 V
Rated impulse withstand voltage U <sub>imp</sub> (IEC/EN 60664-1, VDE 0110)	between all isolated circuits	4 kV; 1.2/50 μs
Power-frequency withstand voltage test (test voltage)	between all isolated circuits	routine test: 2.0 kV; 50 Hz, 1 s type test: 2.5 kV; 50 Hz, 1 min
Basic insulation (IEC/EN 61140)	input circuit / output circuit	500 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

# Electronic timer CT-ARS.21

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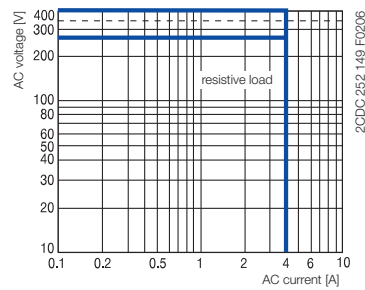
<b>Standards / Directives</b>	<b>1SVR 630 120 R3300</b>	
Product standard	IEC 61812-1, EN 61812-1 + A11, DIN VDE 0435 part 2021	
EMC Directive	2004/108/EC	
Low Voltage Directive	2006/95/EC	
RoHS Directive	2002/95/EC	
<b>Electromagnetic compatibility</b>	<b>1SVR 630 120 R3300</b>	
Interference immunity to	IEC/EN 61000-6-1 IEC/EN 61000-6-2	
electrostatic discharge	IEC/EN 61000-4-2	Level 3 (6 kV / 8 kV)
radiated, radio-frequency, electromagnetic field	IEC/EN 61000-4-3	Level 3 (10 V/m)
electrical fast transient / burst	IEC/EN 61000-4-4	Level 3 (2 kV / 5 kHz)
surge	IEC/EN 61000-4-5	Level 4 (2 kV A1-A2)
conducted disturbances, induced by radio-frequency fields	IEC/EN 61000-4-6	Level 3 (10 V)
harmonics and interharmonics	IEC/EN 61000-4-13	Level 3
Interference emission	IEC/EN 61000-6-3 IEC/EN 61000-6-4	
high-frequency radiated	IEC/CISPR 22, EN 55022	Class B
high-frequency conducted	IEC/CISPR 22, EN 55022	Class B

# Electronic timer CT-ARS.21

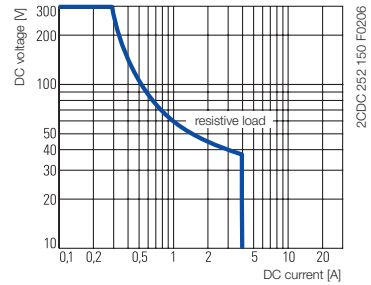
## OFF-delayed without auxiliary voltage with 2 c/o contacts Data sheet

### Technical diagrams

#### Load limit curve

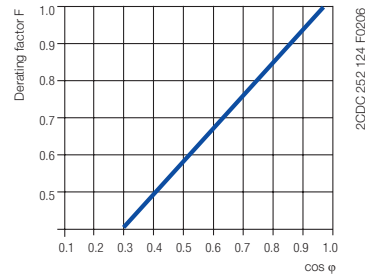


AC load (resistive)



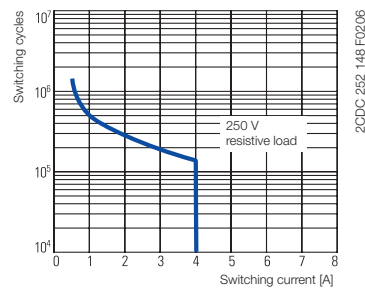
DC load (resistive)

#### Derating factor F



for inductive AC load

#### Contact lifetime

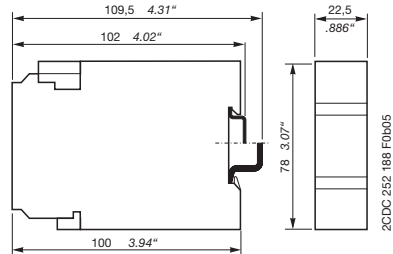


# Electronic timer CT-ARS.21

OFF-delayed without auxiliary voltage with 2 c/o contacts  
Data sheet

## Dimensions

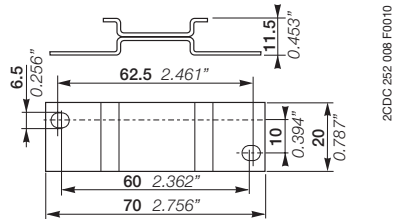
in mm



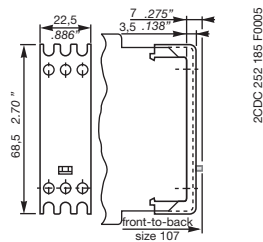
## CT-ARS.21

## Dimensions accessories

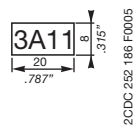
in mm



## ADP.01 - Adapter for screw mounting on panel



## COV.01 - Sealable transparent cover



## MAR.01 - Marker label

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## Synonyms

Used expression	Alternative expression(s)
2 c/o contacts	1 DPDT / 2 SPDT

## Further documentation

Document title	Document type	Document number
Electronic Products and Relays	Technical catalogue	2CDC 110 004 C020x
CT-AHS, CT-ARS, CT-MBS, CT-MFS	Instruction manual	1SVC 630 010 M0000

You can find the documentation on the internet at [www.abb.com/lowvoltage](http://www.abb.com/lowvoltage) →  
Control Products → Electronic Relays and Controls



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