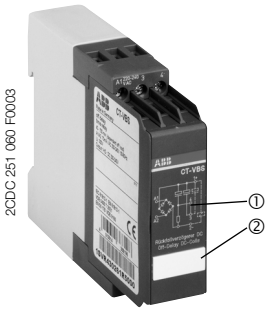
Electronic timer CT-VBS

OFF-delayed without auxiliary voltage, for DC contactors
Data sheet



CT-VBS

① Circuit diagram

② Marker label

Characteristics

- Single-function OFF-delay timer for DC contactors, without auxiliary voltage
- Width 22.5 mm

Approvals

cULus

CCC

Marks

CE

C-Tick

Order data

Type	Supply voltage	Order code
CT-VBS	200-240 V DC	1SVR 430 261 R5000
CT-VBS	100-127 V DC	1SVR 430 261 R6000

Order data (Accessories)

Description	Order code
Adapter for screw mounting on panel	1SVR 430 029 R0100
Sealable cover	1SVR 430 005 R0100
Marker label	1SVR 366 017 R0100

Application

The CT-S range timers are designed for use in industrial applications. They operate over a 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.

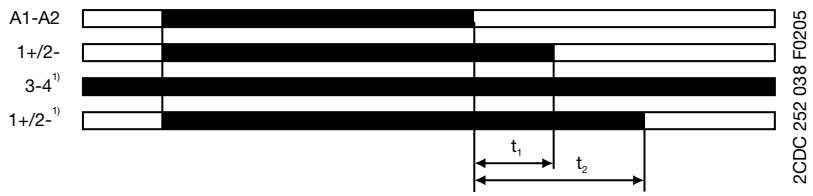
Operating mode

For the CT-VBS version with a 200-240 V AC supply voltage, the time delay is selected by connecting terminal 3 to 4. When jumpered, the time delay is from 0 to 2 s. If terminals 3-4 are not jumpered, the time delay is from 0 to 400 ms. The exact time delays can be seen in the delay time diagrams.

Function diagrams

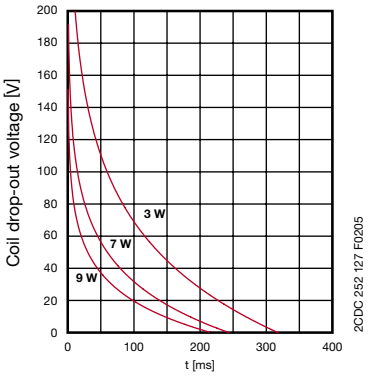
OFF-delay without auxiliary voltage (True delay on break)

The DC contactor connected to the output is energized when supply voltage is applied to terminals A1-A2. If supply voltage is disconnected, the DC contactor remains energized for a short time delay. This delay time depends on the coil drop out voltage and on the wattage of the contactor coil.

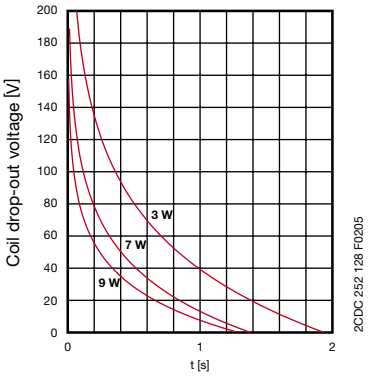


t_1 = OFF-delay (without jumper between terminal 3 and 4 1))
t_2 = OFF-delay (with jumper between terminal 3 and 4 1))
1) only for version 200-240 V AC

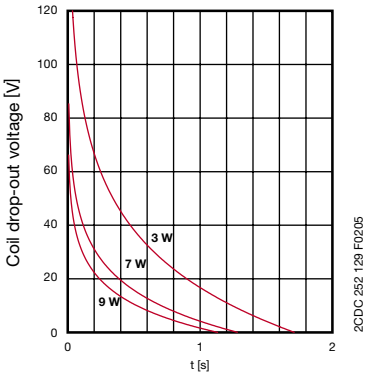
Delay time diagrams



Delay time guideline values
200-240 V AC version without jumper 3/4



Delay time guideline values
200-240 V AC version with jumper 3/4



Delay time guideline values
110-127 V AC version

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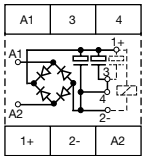
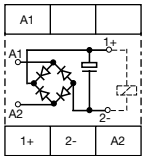
Connection diagrams

CT-VBS



Version: 1SVR 430 261 R5000
A1-A2 Supply: 200-240 V DC
1+ - 2- Contactor coil
3-4 Jumper for setting the time delay

CT-VBS



Version: 1SVR 430 261 R6000
A1-A2 Supply: 110-127 V DC
1+ - 2- Contactor coil

Electronic timer CT-VBS

OFF-delayed without auxiliary voltage, for DC contactors

Data sheet

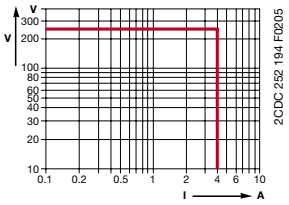
Technical Data

Input circuits		
Supply voltage	A1-A2	200-240 V DC
	A1-A2	100-127 V DC
Power consumption	100-127 V DC	max. 120 mA
	200-240 V DC	max. 70 mA
Supply voltage tolerance		-15...+10 %
Supply voltage frequency	AC/DC Version	DC or 50/60 Hz
	AC Version	50/60 Hz
Duty time		100 %
Timing circuit		
Time range		see delay time diagrams
Recovery time		< 50 ms
Repeat accuracy (constant parameters)		± 5 %
Timing error within the supply voltage tolerance range		± 10 %
Timing error within operating temperature range		0.2 % / °C
Output circuits	1+ - 2-	
Contact material		AgCdO
Related voltage	acc. to VDE 0110, IEC 60947-1	see delay time diagrams
Maximum switching voltage		250 V AC, 250 V DC
Rated switching current acc. to IEC 60947-5-1	AC-12 (resistive) 230 V	4 A
	AC-15 (inductive) 230 V	3 A
	DC-12 (resistive) 24 V	4 A
	DC-15 (inductive) 24 V	2 A
Maximum lifetime	mechanical	30 x 10^6 switching cycles
	electrical (AC-12, 230 V, 4 A)	0.1 x 10^6 switching cycles
Short circuit proof, max. fuse rating	n/c	10 A fast, operating class gL
	n/o	10 A fast, operating class gL
General data		
Enclosure	width	22.5 mm
	length	78.0 mm
	depth	100.0 mm
Wire size	fine-strand with wire end ferrule	2 x 0.75 - 2.5 mm^2 (18-14 AWG)
	fine-strand without wire end ferrule	
	rigid	2 x 0.5 - 4 mm^2 (20-12 AWG)
Weight		approx. 150 g (5.3 oz)
Mounting position		any
Degree of protection	enclosure / terminals	IP50 / IP20
Temperature	operating	-20...+60 °C
	storage	-40...+85 °C
Mounting		DIN rail (EN 50022)
Standards		
Product standard		IEC 61812-1, EN 61812-1
EMC Directive		89/336/EEC
Electromagnetic compatibility		IEC 61000-6-2, EN 61000-6-4
ESD	acc. to IEC 61000-4-2, EN 61000-4-2	level 3 6 kV / 8 kV
HF radiation resistance	acc. to IEC 61000-4-3, EN 61000-4-3	level 3 10 V/m
Burst	acc. to IEC 61000-4-4, EN 61000-4-4	level 3 2 kV / 5 kHz
Surge	acc. to IEC 1000-4-5, EN 61000-4-5	level 4 2 kV L-L
HF line emission	acc. to IEC 1000-4-6, EN 61000-4-6	level 3 10 V
Low Voltage Directive		73/23/EEC
Operational reliability	acc. to IEC 68-2-6	4 g
Mechanical resistance	acc. to IEC 68-2-6	6 g
Approvals / marks		
Approvals		cULus and CCC
Marks		CE and C-Tick
Isolation data		
Rated insulation voltage between supply circuit, control circuit and output circuit	acc. to VDE 0110, IEC 60947-1	supply up to 240 V: 300 V supply up to 440 V: 500 V
Rated impulse withstand voltage between all isolated circuits	acc. to VDE 0110, IEC 664	4 kV / 1.2-50 µs
Test voltage between all isolated circuits		2.5 kV, 50 Hz, 1 min.

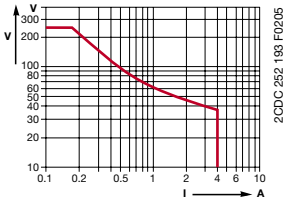
Pollution category	acc. to VDE 0110, IEC 664, IEC 255-5	III/C
Overvoltage category	acc. to VDE 0110, IEC 664, IEC 255-5	III/C
Environmental testing	acc. to IEC 68-2-30	24 h cycle time, 55 °C, 93 % rel., 96 h

Load limit curves

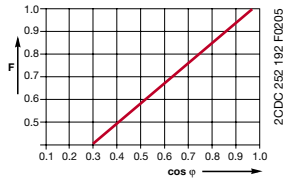
AC load (resistive)



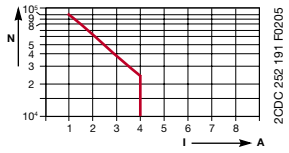
DC load (resistive)



Derating factor F for inductive AC load



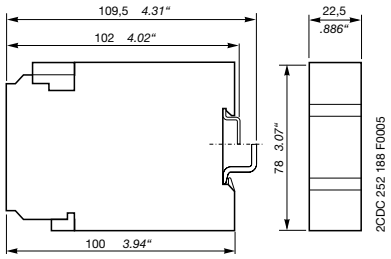
Contact lifetime /switching cycles N



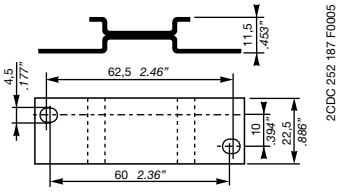
220 V 50 Hz 1 AC 360 cycles/h

Dimensional drawings

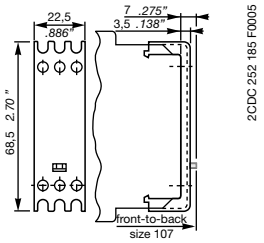
Dimensions in mm



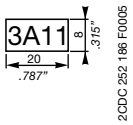
Dimensional drawings (Accessories)



Adapter for screw mounting on panel



Sealable cover



Marker label

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