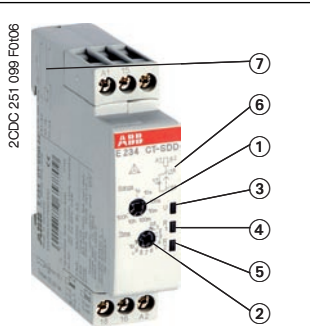


Electronic timer CT-SDD.22

Star-delta change-over with 2 n/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
timing
- ④ R1: yellow LED -
output relay 1 energized
- ⑤ R2: yellow LED -
output relay 2 energized
- ⑥ Circuit diagram
- ⑦ Function diagram

Features

- Rated control supply voltage 24-48 V DC, 24-240 V AC
- Single-function timer star-delta change-over
- 4 time ranges (0.05 s - 10 min) in one device
- 2 n/o contacts
- 3 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

pending
pending

Marks

- CE CE
- C-Tick C-Tick

pending

Order data

Type	Rated control supply voltage	Time range	Output	Order code
CT-SDD.22	24-48 V DC, 24-240 V AC	0.05 s - 10 min	2 n/o contacts	1SVR 500 211 R0100

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-SDD.22 has 2 n/o contacts and offers 4 time ranges, from 0.05 s to 10 min. 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.

Function diagram(s)

▲ Star-delta change-over

This function requires continuous control supply voltage for timing.

Applying control supply voltage to terminals **A1-A2**, energizes the star contactor connected to terminals **17-18** and begins the set starting time t_1 . The green LED flashes during timing. When the starting time is complete, the first output contact de-energizes the star contactor.

Now, the transition time t_2 starts. When the transition time is complete, the second output contact energizes the delta contactor connected to terminals **17-28**. The delta contactor remains energized as long as control supply voltage is applied to the unit.



Electronic timer CT-SDD.22

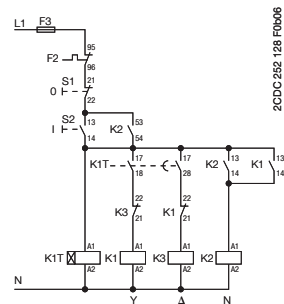
Star-delta change-over with 2 n/o contacts

Data sheet

Example(s) of application

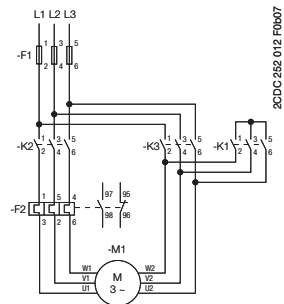
Star-delta change-over

Control circuit diagram

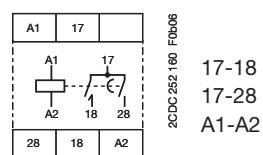


Star-delta change-over

Power circuit diagram



Connection diagram(s)



- 1. n/o contact
- 2. n/o contact
- Rated control supply voltage U_s
24-48 V DC or 24-240 V AC

Electronic timer CT-SDD.22

Star-delta change-over with 2 n/o contacts

Data sheet

Technical data

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

Input circuits - Supply circuit		1SVR 500 211 R0100		
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	16.70 mA / -	- / -	- / -
	24-240 V AC	- / -	66.70 mA / -	52.32 mA / -
Rated frequency		DC; 50/60 Hz		
Frequency range AC		47-63 Hz		
Power failure buffering time		min. 30 ms		
Timing circuit		1SVR 500 211 R0100		
Kind of timer	Single-function timer	Star-delta change-over		
Time ranges 0.05 s - 10 min		0.05-1 s, 0.5-10 s, 5-100 s, 0.5-10 min		
Recovery time		< 50 ms		
Accuracy within the rated control supply voltage tolerance		$\Delta t < 0.005\text{ %/V}$		
Accuracy within the temperature range		$\Delta t < 0.06\text{ %/°C}$		
Star-delta transition time		fixed, 50 ms		
Star-delta transition time tolerance		$\pm 3\text{ ms}$		
Indication of operational states		1SVR 500 211 R0100		
Control supply voltage / timing	U: green LED	 : control supply voltage applied		
Control supply voltage / timing	U: green LED	 : timing		
Relay status	R1: yellow LED	 : output relay 1 energized		
Relay status	R2: yellow LED	 : output relay 2 energized		
Output circuits		1SVR 500 211 R0100		
Kind of output	17-18	Relay, 1. n/o contact		
	17-28	Relay, 2. n/o contact		
Contact material		Cd-free		
Rated operational voltage U_o		250 V		
Derating				
Minimum switching voltage / Minimum switching current		12 V / 100 mA		
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	5 A		
	AC15 (inductive) at 230 V	3 A		
	DC12 (resistive) at 24 V	5 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		

Electronic timer CT-SDD.22

Star-delta change-over with 2 n/o contacts

Data sheet

Output circuits		1SVR 500 211 R0100
General data		1SVR 500 211 R0100
Duty time		100 %
Repeat accuracy (constant parameters)		$\Delta t \leq \pm 0.5 \%$
Dimensions (W x H x D)		17.5 x 70 x 58 mm (0.69 x 2.76 x 2.28 inches)
Weight		65 g (0.14 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 500 211 R0100
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 500 211 R0100
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 500 211 R0100
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)	between all isolated circuits	4 kV; 1.2/50 µs
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
Overtoltage category (IEC/EN 60664-1, VDE 0110, UL 508)		III
Standards / Directives		1SVR 500 211 R0100
Product standard		IEC 61812-1, EN 61812-1 + A11, DIN VDE 0435 part 2021

Electronic timer CT-SDD.22

Star-delta change-over with 2 n/o contacts

Data sheet

Standards / Directives		1SVR 500 211 R0100
EMC Directive		2004/108/EC
Low Voltage Directive		2006/95/EC
RoHS Directive		2002/95/EEC
Electromagnetic compatibility		1SVR 500 211 R0100
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

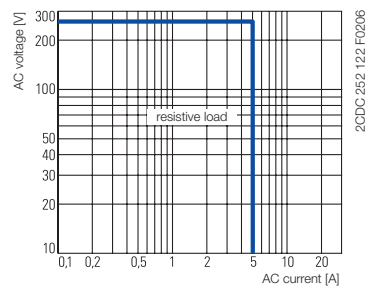
Electronic timer CT-SDD.22

Star-delta change-over with 2 n/o contacts

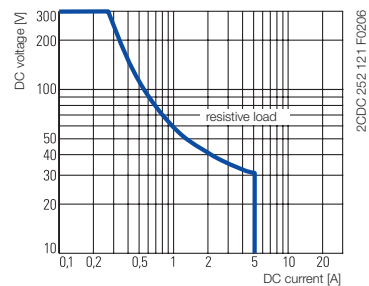
Data sheet

Technical diagrams

Load limit curve

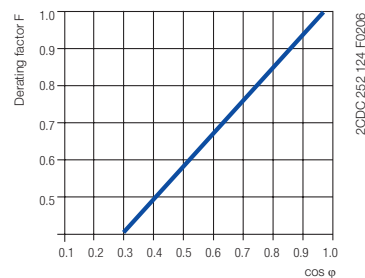


AC load (resistive)



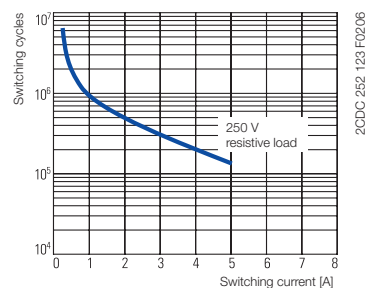
DC load (resistive)

Derating factor F



for inductive AC load

Contact lifetime



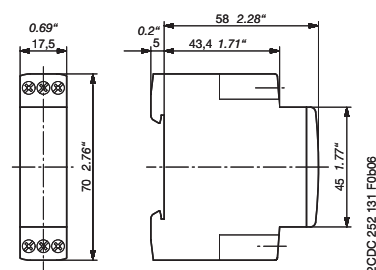
Electronic timer CT-SDD.22

Star-delta change-over with 2 n/o contacts

Data sheet

Dimensions

in mm



CT-SDD.22

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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