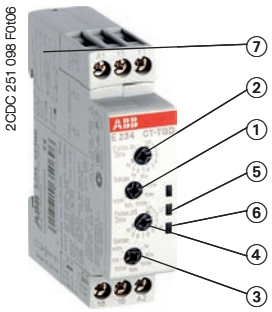
Electronic timer CT-TGD.12

Pulse generator with 1 c/o contact

Data sheet



① Rotary switch for the preselection of the time range of the ON time

② Potentiometer with direct reading scale for the fine adjustment of the ON time

③ Rotary switch for the preselection of the time range of the OFF time

④ Potentiometer with direct reading scale for the fine adjustment of the OFF time

⑤ U: green LED -
control supply voltage applied
timing

⑥ R: yellow LED -
output relay energized

⑦ Function diagram

Features

- Rated control supply voltage 24-48 V DC, 24-240 V AC
- Single-function timer pulse generator
- 2 x 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
C-Tick

Order data

Type	Rated control supply voltage	Time range	Output	Control input	Order code
CT-TGD.12	24-48 V DC, 24-240 V AC	2 x 0.05 s - 100 h	1 c/o contact	voltage-related triggering	1SVR 500 160 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-TGD.12 has 1 c/o contact and provides 2 independent timing circuits, one for adjustment of the ON time and one for adjustment of the OFF time. Two rotary switches, on the front of the unit, allow selection of one of 7 time ranges from 0.05 s to 100 h for each time delay. The fine adjustment of the time delay is made via an internal potentiometer, with a direct reading scale, on the front of the unit.

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Function diagram(s)

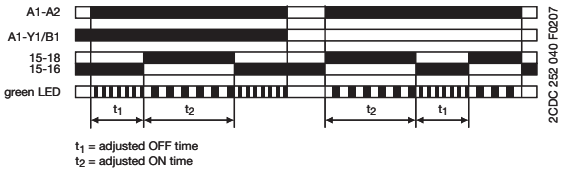
Pulse generator, starting with ON or OFF

This function requires continuous control supply voltage for timing.

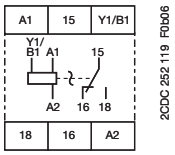
Applying control supply voltage, with open control input **A1-Y1/B1**, starts timing with an ON time first.
Applying control supply voltage, with closed control input **A1-Y1/B1**, starts timing with an OFF time first.
The ON & OFF times are displayed by the flashing green LED, which flashes twice as fast during the OFF time.

The ON & OFF times are independently adjustable.

If control supply voltage is interrupted, the output relay de-energizes and the time delay is reset.



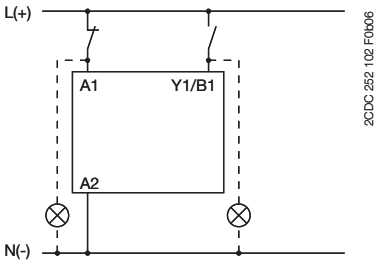
Connection diagram(s)



15-16/18	1. c/o contact
A1-A2	Rated control supply voltage U_S 24-48 V DC or 24-240 V AC
A1-Y1/B1	Control input

Wiring instructions

Parallel load to control input possible / allowed



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Technical data

Data at T_a = 25 °C and rated values, if nothing else indicated

Input circuits - Supply circuit		1SVR 500 160 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	13.21 mA / -	- / -	- / -
	24-240 V AC	- / -	58.53 mA / -	46.81 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 500 160 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	1.07 mA
	230 V AC	1.524 mA
	115 V AC	1.29 mA

Timing circuit		1SVR 500 160 R0000
Kind of timer	Single-function timer	Pulse generator, starting with ON or OFF
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		Δt < 0.005 %/V
Accuracy within the temperature range		Δt < 0.06 %/°C

Indication of operational states		1SVR 500 160 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 500 160 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

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Output circuits		1SVR 500 160 R0000
Maximum switching voltage / Minimum switching current		see load limit curve / see load limit curve
Rated operational current I_e (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 500 160 R0000
Duty time		100 %
Repeat accuracy (constant parameters)		Δt <± 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 500 160 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 500 160 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 500 160 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)	between all isolated circuits	4 kV; 1.2/50 µs

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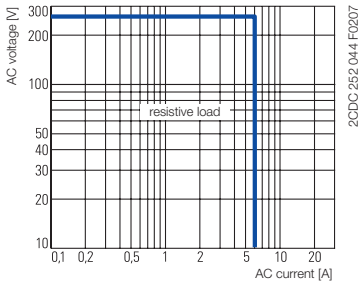
Isolation data		1SVR 500 160 R0000
Power-frequency withstand voltage test (Test voltage, routine test)	between all isolated circuits	2.5 kV, 50 Hz, 1 s
Basic insulation (IEC/EN 61140)	Input circuit / Output circuit	300 V
Protective separation (IEC/EN 61140, VDE 0106 part 101 and part 101/A1)	Input circuit / 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 500 160 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

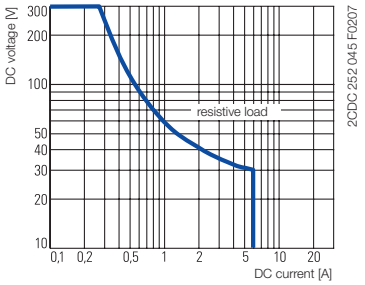
Electromagnetic compatibility		1SVR 500 160 R0000
Interference immunity		IEC/EN 61000-6-1 IEC/EN 61000-6-2
electrostatic discharge (ESD)	IEC/EN 61000-4-2	Level 3 (6 kV / 8 kV)
electromagnetic field (HF radiation resistance)	IEC/EN 61000-4-3	Level 3 (10 V/m)
fast transients (Burst)	IEC/EN 61000-4-4	Level 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

Technical diagrams

Load limit curve

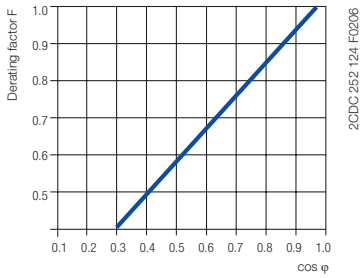


AC load (resistive)



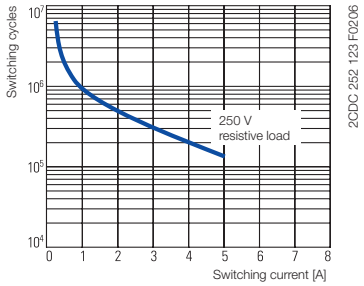
DC load (resistive)

Derating factor F



for inductive AC load

Contact lifetime



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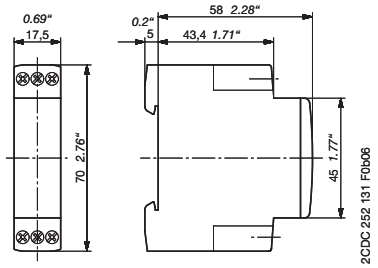
Dimensions

in mm



CT-TGD.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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