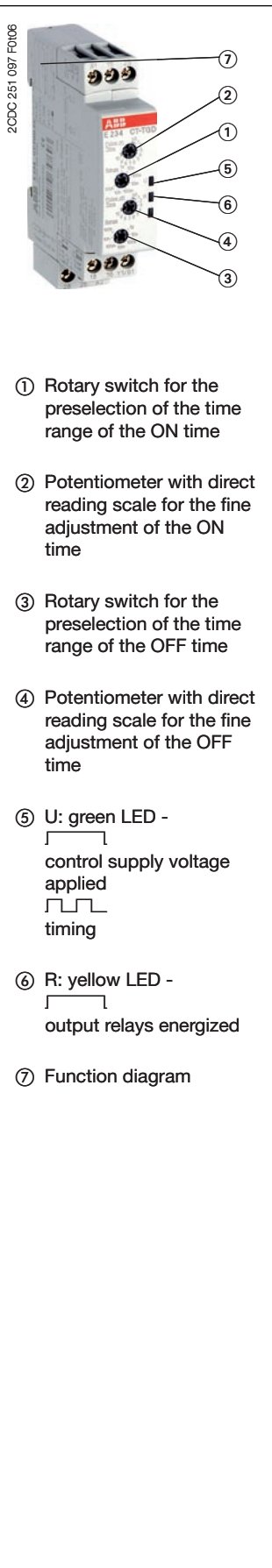


Electronic timer CT-TGD.22

Pulse generator with 2 c/o contacts

Data sheet



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
- 2 c/o contacts (250 V / 5 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	pending
	CCC	pending

Marks

	CE	
	C-Tick	pending

Order data

Type	Rated control supply voltage	Time range	Output	Control input	Order code
CT-TGD.22	24-48 V DC, 24-240 V AC	2 x 0.05 s - 100 h	2 c/o contacts	voltage-related triggering	1SVR 500 160 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-TGD.22 has 2 c/o contacts 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.

Electronic timer CT-TGD.22

Pulse generator with 2 c/o contacts

Data sheet

Function diagram(s)

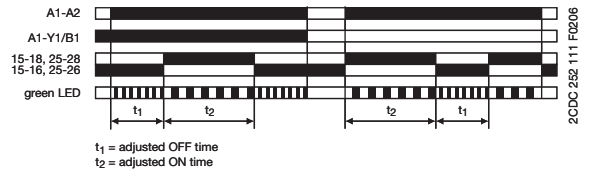
Pulse generator, starting with ON or OFF

This function requires continuous control supply voltage for timing.

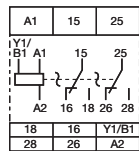
Applying control supply voltage, with open control input **A1-Y1/B1**, starts timing with an ON time first.
Applying control supply voltage, with closed control input **A1-Y1/B1**, starts timing with an OFF time first.
The ON & OFF times are displayed by the flashing green LED, which flashes twice as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

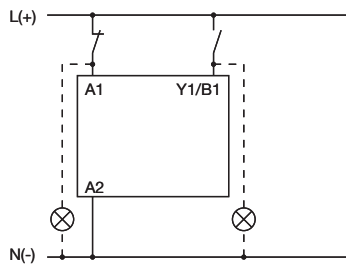


15-16/18
25-26/28
A1-A2
A1-Y1/B1

1. c/o contact
 2. 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



2CDC 252 102 F0006




Electronic timer CT-TGD.22

Pulse generator with 2 c/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 500 160 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	26.20 mA / -	- / -	- / -
	24-240 V AC	- / -	33.20 mA / -	19.90 mA / -
Rated frequency	DC; 50/60 Hz			
Frequency range AC	47-63 Hz			
Power failure buffering time	min. 30 ms			
Input circuits - Control circuit		1SVR 500 160 R0100		
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	0.912 mA		
	230 V AC	6.417 mA		
	115 V AC	3.254 mA		
Timing circuit		1SVR 500 160 R0100		
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	$\Delta t < 0.005\ %/V$			
Accuracy within the temperature range	$\Delta t < 0.06\ %/^{\circ}C$			
Indication of operational states		1SVR 500 160 R0100		
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 R0100		
Kind of output	15-16/18	Relay, 1. c/o contact		
	25-26/28	Relay, 2. c/o contact		
Contact material	Cd-free			
Rated operational voltage U_e	250 V			
Derating				

Electronic timer CT-TGD.22

Pulse generator with 2 c/o contacts

Data sheet

Output circuits		1SVR 500 160 R0100
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_g (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
General data		1SVR 500 160 R0100
Duty time		100 %
Repeat accuracy (constant parameters)		$\Delta t < \pm 0.5 \%$
Dimensions (W x H x D)		17.5 x 80 x 58 mm (0.69 x 3.15 x 2.28 inches)
Weight		approx. 65 g (approx. 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 500 160 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 500 160 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 500 160 R0100
Rated isolation voltage U_i	Output circuit 1 / Output circuit 2	300 V
	Input circuit / Output circuit	300 V

Electronic timer CT-TGD.22

Pulse generator with 2 c/o contacts

Data sheet

Isolation data		1SVR 500 160 R0100
Rated impulse withstand voltage U_{imp} (type test) (IEC/EN 60664-1, VDE 0110)	between all isolated circuits	4 kV; 1.2/50 μ s
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 R0100
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 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

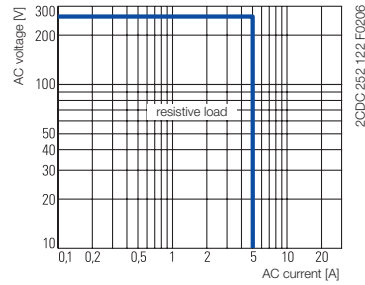
Electronic timer CT-TGD.22

Pulse generator with 2 c/o contacts

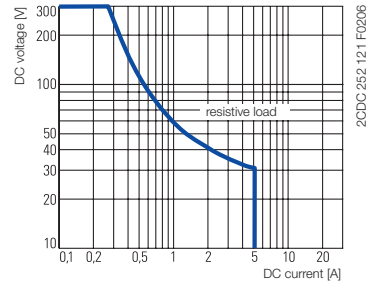
Data sheet

Technical diagrams

Load limit curve

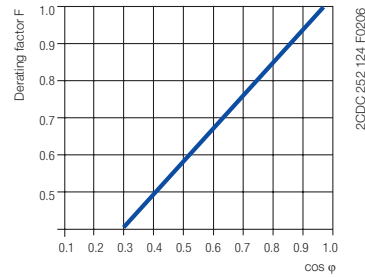


AC load (resistive)



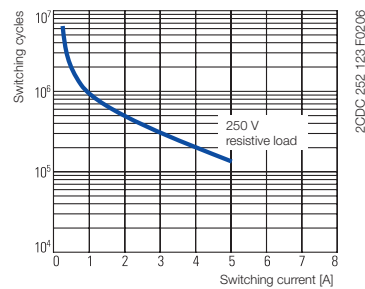
DC load (resistive)

Derating factor F



for inductive AC load

Contact lifetime



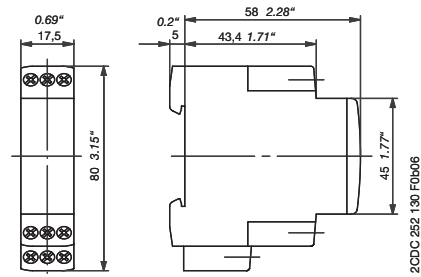
Electronic timer CT-TGD.22

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Data sheet

Dimensions

in mm



CT-TGD.22

Synonyms

Used expression	Alternative expression(s)	Used expression	Alternative expression(s)
2 c/o contacts	1 DPDT / 2 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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Document number: 2CDC 111 063 D0201 (12/2007)

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