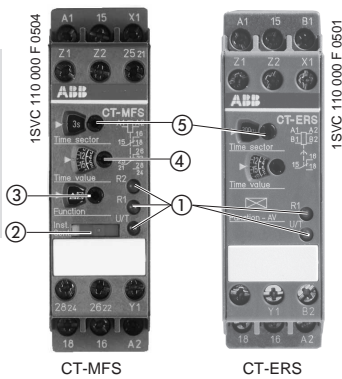


Electronic timers CT-S, CT-E range

Benefits and advantages

Electronic timers CT-S range

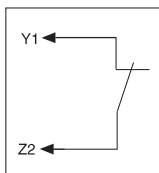
Electronic
timers



- 1 Display of operational status by 2 or 3 LEDs
R2 - output relay 2 energized = red LED
R1 - output relay 1 energized = red LED
U - supply voltage = green LED
U/T-supply voltage = green LED flashing while timing
- 2 Slide switch to set the 2nd c/o contact as an instantaneous contact.
- 3 Rotary switch to preselect the desired function.
- 4 Potentiometer with direct reading scale to set the desired time delay.
- 5 10 selectable time ranges from 1s-300h

Characteristics of CT-S range

- 3 multifunction and 21 multi-range timers
- Continuous supply voltage range (24-240VAC/DC) or multisupply voltage ranges (12-40VAC/12-60V/DC; 24V, 42-48VAC/DC; 110-240VAC; 380-440VAC)
- 1 or 2c/o contacts (250V/4A)
- 2nd c/o contact can be selected as instantaneous contact (front-face selection switch)
- Timing function is initiated via external, voltage free control contacts or via supply voltage
- Remote potentiometer connection feature
- Time stop function is possible via external control contact
- In compliance with international standards and approvals

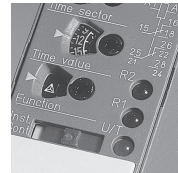


Volt free (dry) control contacts

The controlling of the CT-S range timers is done by volt free (dry) control contacts via cable length up to 50m without interferences.

Time range preselection and fine adjustment

Multicolor scales allow the direct selection of the time range, scaled for the adjustment potentiometer.



Display of operational states

All actual operational states are displayed by front-face LEDs, thus simplifying installation.

Double-chamber cage connecting terminals

Double-chamber cage connecting terminals provide connection of up to two wires to 2x2.5mm² (2x14AWG), solid or stranded, with or without wire end ferrules.

Potential distribution does not require additional terminations, thus saving time and money. Wiring is considerably simplified through integrated cable guides.

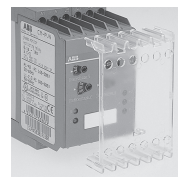


Connection of remote potentiometers

The CT-S range allows fine adjustment of the time ranges via an external potentiometer. The internal potentiometer switches off automatically when an external one is connected.

Integrated markers

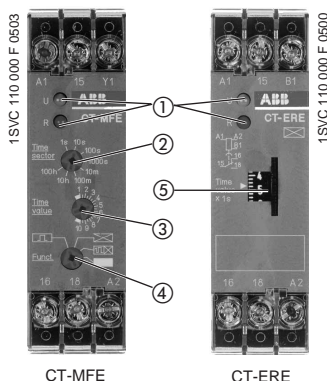
Integrated markers allow the product to be marked quickly and simply. No additional marking labels are required.



Sealable transparent covers

Protection against unauthorized change of time values (available as an accessory).

Electronic timers CT-E range



- 1 Display of operational status by 2 LEDs
U - supply voltage = LED green
R - output relay energized = LED red
- 2 8 selectable time ranges from 0.05s-100h
- 3 Potentiometer with direct reading scale to set the desired time value.
- 4 Rotary switch to preselect the desired function.
- 5 Potentiometer to adjust the desired time value.

Combination screws

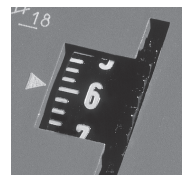
To actuate the connecting combination screws, only one tool is needed.

Remark: 1c/o = SPDT; 2c/o = DPDT



Direct reading scales

Direct setting of the delay time without any additional calculation provides fast positive adjustment.



Characteristics of CT-E range

- 12 single function timers and 2 multifunction timers (24-240VAC/DC)
- Single or dual supply voltage ranges 24VAC/DC, 110-130VAC, 220-240VAC
- Output contacts – 1c/o contact (250V/4A) or solid-state output for high switching frequencies (thyristor 0.8A)
- Time ranges 0.1...10s, 0.3...30s, 3...300s, 0.3...30min
- In compliance with international standards and approvals



Electronic timers CT-S range

Selection and ordering details

Characteristics CT-S range

- 3 multifunction and 21 multi-range timers
- Continuous supply voltage range (24-240VAC/DC) or multisupply voltage ranges (12-40VAC/12-60VDC; 24V, 42-48VAC/DC; 110-240VAC; 380-440VAC)
- 1 or 2c/o contacts (250V/4A)
- 2nd c/o contact can be set as instantaneous contact (front-face selection switch)
- Timing function is initiated via external, voltage free (dry) control contacts or via supply voltage
- Remote potentiometer connection feature
- Time stop function is possible via external control contact
- In compliance with international standards and approvals



Supply voltage	Control contacts, timing start	Control contacts, timing stop	Remote potentiometer connection	Order code	Price 1 piece
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CT-MFS, multifunction timer, 8 functions¹⁾, 10 time ranges (0.05s-300h), 2c/o²⁾, 3 LEDs

24-240VAC/DC	•	•	•	1SVR 430 010 R 0200	
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CT-MBS, multifunction timer, 8 functions¹⁾, 10 time ranges (0.05s-300h), 2c/o²⁾, 3 LEDs

12-40VAC, 12-60VDC	•		•	1SVR 430 010 R 1200	
24VAC/DC, 110-240VAC				1SVR 430 012 R 0200	
380-440VAC				1SVR 430 011 R 2200	

CT-MBS, multifunction timer, 6 functions¹⁾, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs

12-40AC/12-60VDC	•	•	•	1SVR 430 010 R 1100	
24V/42-48VAC/DC, 110-240VAC				1SVR 430 013 R 0100	
380-440VAC				1SVR 430 011 R 2100	

☒ **CT-ERS**, ON-delay timer, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs

12-40VAC/12-60VDC				1SVR 430 100 R 1100	
24V/42-48VAC/DC, 110-240VAC				1SVR 430 102 R 0100	
380-440VAC				1SVR 430 101 R 2100	

☒ **CT-ERS**, ON-delay timer, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs

24V/42-48VAC/DC, 110-240VAC	•	•	•	1SVR 430 103 R 0100	
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☒ **CT-ERS**, ON-delay timer, 10 time ranges (0.05s-300h), 2c/o²⁾, 3 LEDs

12-40VAC/12-60VDC			•	1SVR 430 100 R 1200	
24V/42-48VAC/DC, 110-240VAC				1SVR 430 103 R 0200	
380-440VAC				1SVR 430 101 R 2200	

■ **CT-AHS**, OFF-delay timer, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs

24V/42-48VAC/DC, 110-240VAC	•	•	•	1SVR 430 113 R 0100	
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■ **CT-AHS**, OFF-delay timer, 10 time ranges (0.05s-300h), 2c/o²⁾, 3 LEDs

24V/42-48VAC/DC, 110-240VAC	•			1SVR 430 113 R 0200	
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■ **CT-APS**, OFF-delay timer with voltage controlled input, 10 time ranges (0.05s-300h), 2c/o²⁾, 3 LEDs

24V/42-48VAC/DC, 110-240VAC	•			1SVR 430 183 R 0300	
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■ **CT-ARS**, OFF-delay timer without auxiliary voltage⁴⁾, 7 time ranges (0.05s-10min), 1c/o, 2 LEDs

24-240VAC/DC				1SVR 430 120 R 0100	
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■ **CT-ARS**, OFF-delay timer without auxiliary voltage⁴⁾, 7 time ranges (0.05s-10min), 2c/o, 3 LEDs

24-240VAC/DC			•	1SVR 430 120 R 0300	
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1) Functions: ON-delay, OFF-delay, impulse-on, impulse-off, flasher starting with ON, flasher starting with OFF, 2x star-delta

2) 2nd c/o can be selected as instantaneous contact (via front-face selection switch)

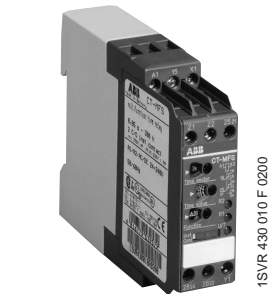
3) Functions: ON-delay, OFF-delay, impulse-on, impulse-off, flasher starting with ON, flasher starting with OFF

4) True OFF-delay

Packing unit 1 piece

Remark: 1c/o = SPDT; 2c/o = DPDT

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CT-MFS

1SVR 430 010 F 0200



CT-MBS (1We)

1SVR 430 013 F 0100



CT-ERS

1SVR 430 103 F 0200



CT-AHS

1SVR 430 113 F 0100



CT-ARS

1SVR 430 120 F 0300

Electronic timers CT-S range

Selection and ordering details

Electronic
timers



CT-EBS

1SVR 430 153 F 0200



CT-TGS

1SVR 430 163 F 0100



CT-YDAV

1SVR 430 203 F 0200



CT-YDEW

1SVR 430 213 F 0200



CT-IRS

1SVR 430 221 F 7300

Supply voltage	Control contacts, timing start	Control contacts, timing stop	Remote potentiometer-connection	Order code	Price 1 piece
☒ ■ CT-EAS , ON- and OFF-delay timer, symmetrical times, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs					
24V, 42-48VAC/DC, 110-240VAC	•	•	•	1SVR 430 173 R 0100	
☒ ■ CT-EAS , ON- and OFF-delay timer, symmetrical times, 10 time ranges (0.05s-300h), 2c/o ²⁾ , 3 LEDs					
24V, 42-48VAC/DC, 110-240VAC	•			1SVR 430 173 R 0200	
☒ ■ CT-EVS , ON- and OFF-delay timer, asymmetrical times ¹⁾ , 2x10 time ranges (0.05s-300h), 1c/o, 2 LEDs					
24V, 42-48VAC/DC, 110-240VAC	•	•	•	1SVR 430 193 R 0100	
1⌚ ☒ CT-VWS , impulse-on, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs					
24VAC/DC, 110-240VAC				1SVR 430 132 R 0100	
1⌚ ☒ CT-VWS , impulse-on, 10 time ranges (0.05s-300h), 2c/o ²⁾ , 3 LEDs					
24V, 42-48VAC/DC, 110-240VAC			•	1SVR 430 133 R 0200	
1⌚ ■ CT-AWS , impulse-off, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs					
24V, 42-48VAC/DC, 110-240VAC	•	•	•	1SVR 430 143 R 0100	
1⌚ ■ CT-AWS , impulse-on, 10 time ranges (0.05s-300h), 2c/o ²⁾ , 3 LEDs					
24V, 42-48VAC/DC, 110-240VAC	•			1SVR 430 143 R 0200	
⌚ ■ CT-EBS , flasher, starting with "OFF", symmetrical ON/OFF intervals, 10 time ranges (0.05s-300h), 1c/o, 2 LEDs					
24VAC/DC, 110-240VAC				1SVR 430 152 R 0100	
⌚ ■ CT-EBS , flasher, starting with "OFF", symmetrical ON/OFF intervals, 10 time ranges (0.05s-300h), 2c/o ²⁾ , 3 LEDs					
24V, 42-48VAC/DC, 110-240VAC			•	1SVR 430 153 R 0200	
⌚ ☒ CT-TGS , pulse generator ³⁾ , 10 time ranges (0.05s-300h), 1c/o, 2 LEDs					
24V, 42-48VAC/DC, 110-240VAC	•	•	•	1SVR 430 163 R 0100	
⌚ ☒ CT-PGS , single pulse generator ³⁾ , 10 time ranges (0.05s-300h), 1c/o, 2 LEDs					
24V, 42-48VAC/DC, 110-240VAC	•	•	•	1SVR 430 253 R 0100	
△ ☒ CT-YDAV , Star delta timer, twice ON-delayed, 10 time ranges (0.05s-300h), c/o time 50ms, 2c/o, 3 LEDs					
24V, 42-48VAC/DC, 110-240VAC				1SVR 430 203 R 0200	
380-440VAC				1SVR 430 201 R 2300	
△ 1⌚ CT-YDEW , Star delta timer					
10 time ranges (0.05s-300h), c/o time 50ms, 1n/o delayed, 1n/o non-delayed, 3 LEDs					
24V, 42-48VAC/DC, 110-240VAC				1SVR 430 213 R 0200	
C566 , OFF-delay for DC coils, delay time depending on coil					
200-240VDC				1SAR 380 000 R 0008	
100-127VDC				1SAR 380 000 R 0007	
☐ CT-IRS , switching relay, 1c/o, 2 LEDs					
24VAC/DC				1SVR 430 220 R 9100	
42-48VAC/DC				1SVR 430 220 R 8100	
110-240VAC				1SVR 430 221 R 7100	
☐ CT-IRS , switching relay, 2c/o, 2 LEDs					
24VAC/DC				1SVR 430 220 R 9300	
42-48VAC/DC				1SVR 430 220 R 8300	
110-240VAC				1SVR 430 221 R 7300	
☐ CT-IRS , switching relay, 2c/o, with gold plated contacts, 2 LEDs					
24VAC/DC				1SVR 430 230 R 9300	
110-240VAC/DC				1SVR 430 231 R 7300	
☐ CT-IRS , switching relay, 3c/o, 2 LEDs					
24VAC/DC				1SVR 430 220 R 9400	
42-48VAC/DC				1SVR 430 220 R 8400	
220-240VAC				1SVR 430 221 R 1400	

- 1) Times for ON- and OFF-delay adjustable independently
2) 2nd c/o selectable as instantaneous contact

- 3) ON- and OFF-time adjustable independently
4) 2 remote potentiometers connectable

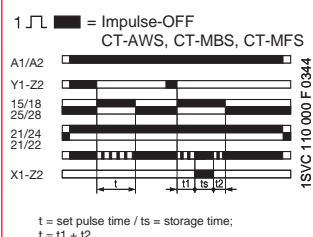
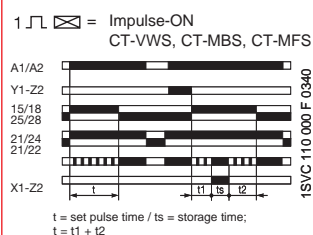
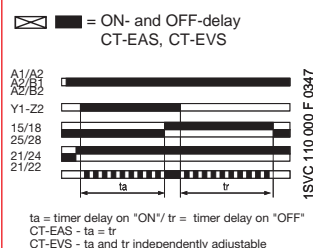
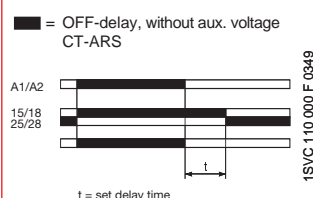
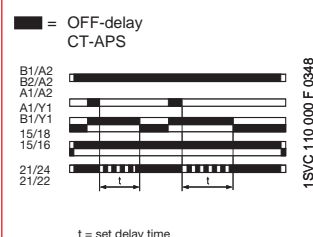
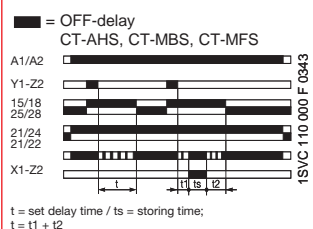
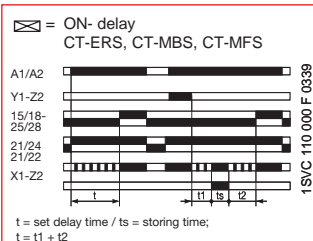
Remark: 1c/o = SPDT; 2c/o = DPDT

Packing unit 1 piece

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Electronic timers CT-S range

Function diagrams



ON-delay / Delay on make

Timer is started when the supply voltage is applied, control contact **Y1/Z2** is being open. The green LED flashes while timing. The output relay is energized and the flashing light turns steady after the set delay time has elapsed. If the supply is disconnected, the output relay resets and the elapsed time is reset. Timing can also be started by opening control contact **Y1/Z2** with the supply voltage applied. If the control contact **Y1/Z2** closes after the supply voltage has been applied, all the internal functions are reset. By closing the control contact **X1/Z2** the timer can be stopped. The elapsed time is stored.

Timing continues by opening the contact. This can be repeated as often as required.

By setting the slide switch to position Inst., the 2nd c/o contact operates instantaneously when the supply voltage is applied.

Both c/o contacts reset if the supply is disconnected.

By connecting a remote potentiometer at the **Z1/Z2** terminals the time can be set externally. When connecting an external potentiometer the internal potentiometer is automatically switched off.

OFF-delay / Delay on break volt free (dry contact) control input

This function needs a permanent supply at the **A1/A2** terminals for timing. Timing is controlled by a potential-free contact at the **Y1/Z2** terminals. If the contact is closed, the output relay is energized. If the contact is opened, the set time starts to elapse (control pulse length 20 ms min.). The green LED flashes while timing. The LED turns steady and the output relay is opened if the timer has elapsed. By closing the control contact **X1/Z2** the timer can be stopped.

The elapsed time is stored. Timing continues by opening the contact. This can be repeated as often as required.

By connecting a remote potentiometer at the **Z1/Z2** terminals, the time can be set externally. When connecting an external potentiometer the internal potentiometer is automatically switched off. Both c/o contacts reset if the supply is disconnected.

OFF-delay / Delay on break volt controlled input contact

The OFF-delay time relay CT-APS needs a permanent supply at the terminals **A1/A2**, **B2/A2** or **B1/A2**. Timing is controlled by supply voltage related control contact at the **Y1** terminal. If the control contact is closed the output relay energizes. If the control contact is opened, the set time starts to elapse (control pulse length 20ms min.). The green LED flashes while timing.

The LED turns steady and the output relay is de-energized if the timer has elapsed. By setting the slide switch to position Inst., the 2nd c/o contact operates as an instantaneous contact.

If supply is disconnected while timing both outputs are de-energized.

OFF-delay, without auxiliary voltage / True OFF-delay

CT-ARS is an OFF-delay timer which does not require supply power at the **A1/A2** terminals while timing. After a storage time of several months, a charging time of about 5 minutes is necessary. For this, voltage must be applied to the unit. When applying the voltage the output relay is energized and after disconnecting the supply, the preset time starts to elapse. By connecting a remote potentiometer at the **Z1/Z2** terminals, the time can be set externally.

When connecting a remote potentiometer the factory-mounted jumper on the **Z1/Z2** terminals must be removed and the internal potentiometer must be set on the smallest possible value. For correct functioning of the unit, it is necessary to observe the minimum energizing time.

As soon as the timer starts to elapse, both LEDs will turn off.

ON and OFF-delay, symmetrical times (CT-EAS), asymmetrical times (CT-EVS)

The time relay needs a continuous supply voltage at the **B1** and **A2**, **B2** and **A2** or **A1** and **A2** respectively. The ON-delay function starts by closing the control contact **Y1-Z2**. After the timer has elapsed and is opened the control contact **Y1-Z2**, the OFF-delay is started.

The green LED flashes during timing of both functions.

If the slide switch is set to the Inst. position, the 2nd c/o contact is energized immediately, and the 1st c/o contact, after the delay time has elapsed.

Both c/o contacts reset if the supply is disconnected.

Impulse-ON / Interval

The output relay is energized without delay when the supply voltage is applied to the **A1** and **A2** terminals and is de-energized after the set time has elapsed.

The green LED flashes while timing. The flashing LED turns steady as soon as the set time has elapsed. Timing can also be started by opening control contact **Y1/Z2** with the supply voltage applied. By closing the control contact **X1/Z2**, the timer can be stopped. The elapsed time is stored.

Timing continues by opening the contact. This can be repeated as often as required.

By setting the slide switch to position Inst., the 2nd c/o contact is. The 2nd c/o contact resets if the supply is disconnected.

By connecting a remote potentiometer at the **Z1/Z2** terminals, the time can be set externally. When connecting an external potentiometer the internal potentiometer is automatically switched off. Both c/o contacts reset if the supply is disconnected.

Impulse-OFF / Trailing edge interval

The supply voltage must be applied continuously. By opening control contact **Y1/Z2**, the output relay is energized immediately and timing starts. The green LED flashes while timing. The flashing LED turns steady and the output relay resets after the set time has elapsed. Timing can be stopped by closing control contact **X1/Z2**. The elapsed time is stored. Timing continues by opening the contact.

This function can be repeated as often as required.

If the slide switch is set to Inst. position, the 2nd c/o contact is energized immediately as supply voltage is connected.

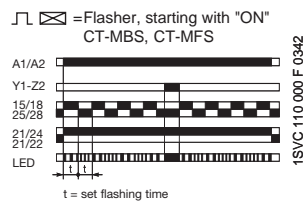
If de-energized when supply voltage is disconnected.

By connecting a remote potentiometer at the **Z1/Z2** terminals the time can be set externally. When connecting an external potentiometer the built-in one is automatically switched off. Both c/o contacts reset if the supply is disconnected.

Remark: 1c/o = SPDT; 2c/o = DPDT

Electronic timers CT-S range

Function diagrams

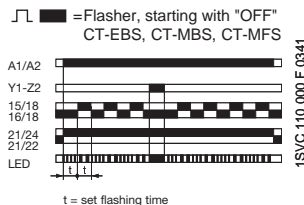


Flasher, starting with "ON" / Recycling equal times-ON first

After connecting the supply power to the **A1** and **A2**, the timer will start to pulse in a symmetrical ON/ OFF cycle. This cycle will be displayed by the flashing green LED, which flashes twice as fast in the OFF cycle. When closing the control contact **Y1/Z2** at applied supply voltage, the output relay will open.

Opening the control contact again, restarts the pulse again in the preset cycle.

If the slide switch is set to the Inst. position, the 2nd c/o contact is energized immediately when supply voltage is applied. Both c/o contacts reset if supply voltage is disconnected.



Flasher, starting with "OFF" / Recycling equal times-OFF first

After applying the supply power to the **A1** and **A2** terminals, the timer will start to pulse in a symmetrical OFF/ON cycle. This cycle will be displayed by the flashing green LED which flashes twice as fast in the OFF cycle.

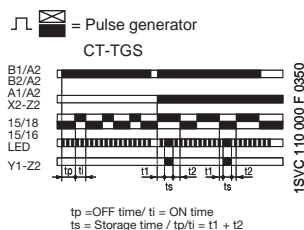
When closing the control contact **Y1/Z2** at applied supply voltage, the output relay will be de-energized. By opening the control contact again, the relay will start to flash in the preset cycle.

If the slide switch is set to the Inst. position, the 2nd c/o contact will be energized immediately as an instantaneous contact after

applying the supply. When disconnecting the supply, it will be de-energized.

By connecting a remote potentiometer at the **Z1/Z2** terminals the timer can be set externally, the built-in potentiometer is automatically switched off.

Both c/o contacts reset if supply voltage is disconnected.



Pulse generator / Recycling unequal times

ON and OFF times ranging from 0.05s ... 300 h can be set independently of each other.

Time ranges are set using two turn-switches. The desired time values are set using built-in potentiometers with direct reading scales.

Time ranges can also be set by remote potentiometers. The built-in potentiometers are switched off automatically when remote potentiometers are connected.

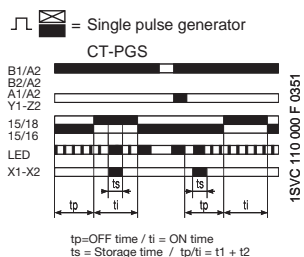
The function can be changed from "OFF" cycle to "ON" cycle using **X2/Z2** terminals as an external link. The relationship of the internal and external potentiometers remain unchanged.

By closing the control contact **X1/Z2**, the timer for ON/OFF cycle can be stopped.

The actual time value is stored. By opening the contact again, the timer continues timing from this point.

This function can be repeated as often as required.

After applying the supply to the **B2/A2** or respectively to the **A1/A2** terminals, the CT-TGS starts - as selected - to work with an "ON" or an "OFF" cycle. The "ON"/ "OFF" cycle is displayed with the flashing green LED.



Single pulse generator (impulse) / Delay on make interval

When applying the supply voltage at the terminals **B1/A2**, **B2/A2**, **A1/A2**, the output relay will be energized after the preset delay on operate time and will then be de-energized after the delay on release time has elapsed.

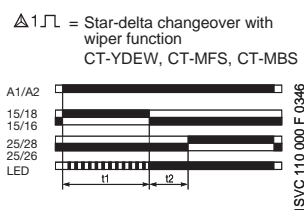
Timing can be stopped by closing the control contact **X1/Z2**.

When opening the contact again, the timer will continue at the stored time value.

Timing can also be started by opening the control contact **Y1/Z2** and applied supply.

If the control contact **Y1/Z2** is closed after applying the supply voltage, the internal function is reset.

With the PGS, a single pulse can be produced with a delay.



Star-delta changeover with impulse

CT-YDEW is designed especially for starting-up squirrel cage motors by a star-delta starter.

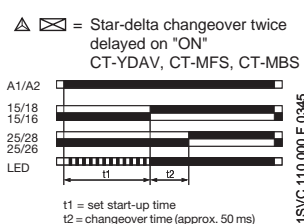
It uses two separate timing circuits: a variable timing circuit for the start-up time in star-mode, and a fixed timing circuit with 50ms for the transit time from star contactor to delta contactor.

If the supply is applied to the **A1/A2** terminals, the first output relay will close.

After the first output relay has opened, the second timer with 50 ms will start to elapse.

After this timer has elapsed, the second output relay will close and stay closed until the supply is disconnected.

Timing is displayed by the flashing green LED.



Star-delta changeover twice ON-delayed

CT-YDAV is designed especially for starting-up squirrel cage motors by a star-delta starter.

It uses two separate timing circuits: a variable timing circuit for the start-up time star-mode and a fixed timing circuit with 50 ms for the transit time from star contactor to delta contactor.

If the supply is applied to the **A1/A2** terminals, the first output relay will close after the preset time. The second output relay will close after another 50 ms and stay closed until the supply is disconnected. Timing is displayed by the flashing green LED.

Remark: 1c/o = SPDT; 2c/o = DPDT

Electronic timers CT-S range

Technical data

Electronic
timers

Terminals used		CT-S range
Input circuits		
Supply voltage - power consumption	A1-A2	24-240VAC/DC - approx. 2-2.5VA/W ⁵⁾
	A1-A2	12-40VAC - approx. 0.6-1.8VA
	A1-A2	12-60VDC - approx. 0.6-2.5VA
	B1-A2	24VAC/DC - approx. 0.5VA/W
	B2-A2	42-48VAC/DC - approx. 1.8VA/W
	A1-A2	110-240VAC - approx. 2-3VA ¹⁾ / approx. 2.5-12VA
	A1-A2	380-440VAC - approx. 3VA
Tolerance of the supply voltage		-15%...+10%
Supply voltage frequency	AC/DC versions	DC (0Hz), 50/60Hz
	AC versions	50/60Hz
Control contact connections, volt-free ²⁾	Y1-Z2	external timer start
	X1-Z2	timer stop, time storage
Minimum control pulse length		20ms
Floating voltage at the control contacts ³⁾		10-40VDC
Max. current in the control circuit		1mA
Max. cable length to the control inputs		50m
Remote potentiometer connection	Z1-Z2	50kΩ
Max. cable length to remote potentiometer		2x25m, shield to Z2 potential
Duty time		100%
Timing circuit		
Time ranges		10 time ranges 0.05s-300h 1.) 0.05-1s 2.) 0.15-3s 3.) 0.5-10s 4.) 1.5-30s 5.) 5-100s 6.) 15-300s 7.) 1.5-30min 8.) 15-300min 9.) 1.5-30h 10.) 15-300h
Recovery time		<50ms
Repeat accuracy (constant parameters)		<0.2%
Timing error within the tolerance of supply voltage		<0.008% / % Δ U
Timing error within temperature range		<0.07% / °C
Display of operational states		
Supply voltage / timer		green LED steady / flashing while timing
1. Output relay energized		red LED
2. Output relay energized		red LED
Output circuits		
15-16/18, 25(21)-26(22)/28(24)		
No. of contacts		Relays, 1 or 2c/o (2nd c/o with selectable instant. function)
Contact material		AgCdo
Rated voltage acc. to VDE0110, IEC947-1		250V
Max. switching voltage		250VAC, 250VDC
Rated switching current acc. to IEC941-x AC12 (resistive)	230V	4A
Rated switching current acc. to IEC941-x AC15 (inductive)	230V	3A
Rated switching current acc. to IEC941-x DC12 (resistive)	24V	4A
Rated switching current acc. to IEC941-x DC13 (inductive)	24V	2A
Maximum mechanical life		30x10 ⁶
Maximum electrical life (acc. to AC12, 230V, 4A)		0.1x10 ⁶
Short circuit proof, max. fuse rating	n/c	10A fast, operating class gL
	n/o	10A fast, operating class gL

Remark: 1c/o = SPDT; 2c/o = DPDT

Electronic timers CT-S range

Technical data, standards, load limit curves

	CT-S range
General data	
Width of the enclosure	22.5mm
Wire size	2x2.5mm ² (2x14AWG) stranded with wire end ferrule
Weight	approx. 150g/5.3oz
Mounting position	any
Degree of protection enclosure / terminals	IP50/IP20
Operating temperature	-20°C...+60°C
Storage temperature	-40°C...+85°C
Mounting	DIN rail (EN50022)
Mechanical shock resistance acc. to IEC68-2-6	6G
Standards / directives	
Product standard	parts of IEC 255 , IEC 1812-1
Electromagnetic compatibility	93/68/EWG
EMC-tests acc. to EN50082-2	
ESD acc. to IEC1000-4-2, EN61000-4-2	level 3-6kV/8kV
HF radiation resistance acc. to IEC1000-4-3, EN61000-4-3	level 3-10V/m
Burst acc. to IEC1000-4-4, EN61000-4-4	level 3-2 kV/5 kHz
Surge acc. to IEC1000-4-5, EN61000-4-5	level 4-2kV L-L
HF line emission acc. to IEC1000-4-6, EN61000-4-6	level 3-10V
Low voltage directive	93/68/EWG
Resistance to vibration	10G, f = 55Hz, a = 0.95mm, t = 2h per level
Approvals	
cULus, GL, GOST	
Isolation data	
Rated Isolation voltage to VDE0110, IEC947-1 between supply-, control- and output circuit	Supply 240V-300V Supply 440V-500V
Rated impulse withstand voltage to VDE0110, IEC664 -between all isolated circuits	4kV/1.2-50µs
Test voltage between all isolated circuits	2.5kV, 50Hz, 1min. ⁴⁾
Pollution category acc. to VDE0110, IEC664/IEC255-5	III/C
Overvoltage category acc. to VDE0110, IEC664/IEC255-5	III/C
Environmental tests acc. to IEC68-2-30	24h cycle, 55°C, 93% rel., 96h

¹⁾ CT-MBS 1c/o, CT-MBS 2c/o, CT-ERS 1c/o, CT-EVS, CT-APS, CT-EBS 1c/o

²⁾ see connection example page 23, 24

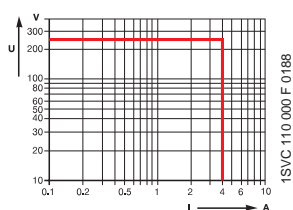
³⁾ no galvanic isolation to supply circuit

⁴⁾ 2kV, 50Hz, 1min. for CT-ARS

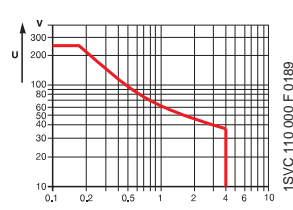
⁵⁾ CT-ARS: 24VAC/DC - approx. 1A for 30ms
18VAC/DC - approx. 1A for 20ms
110-130VAC - approx. 1A for 15ms
220-240VAC - approx. 1A for 10ms

Load limit curves

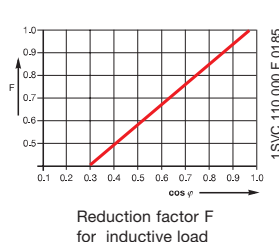
AC load (resistive)



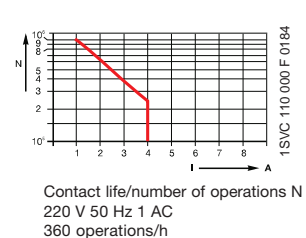
DC load (resistive)



Reduction factor for inductive AC load



Contact life



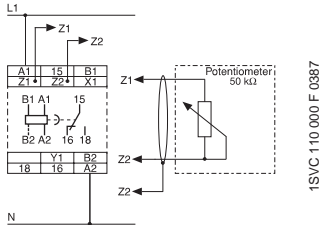
Electronic timers CT-S range

Wiring diagrams, connection examples

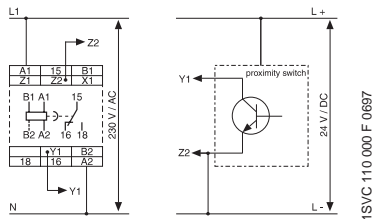
star-delta applications

CT-S range wiring diagrams

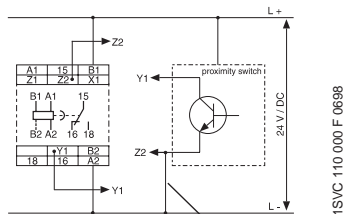
Connection diagram using a remote potentiometer



Connection diagram of a proximity switch (3 wire) with 230VAC supply



Connection diagram of a proximity switch (3 wire) with 24VDC supply



For multifunction timer CT-MFS this jumper is not required

Connection diagram of the control contacts

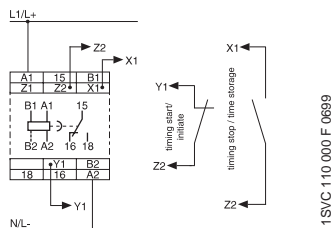
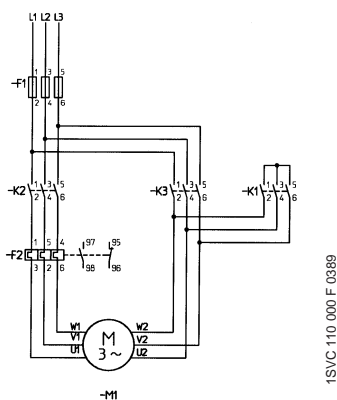
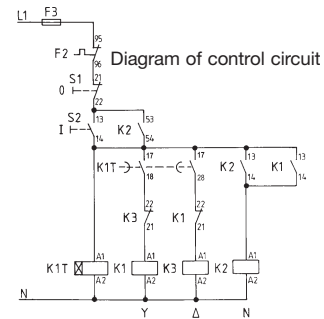
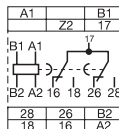


Diagram of main circuit



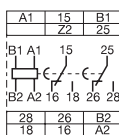
CT-YDEW

Star-delta timer with relay output impulse function

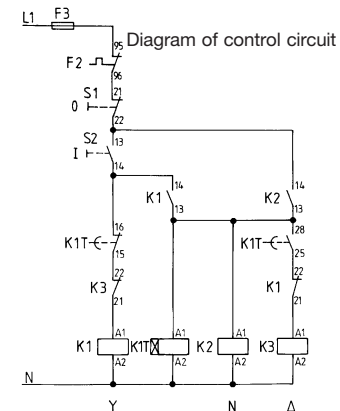
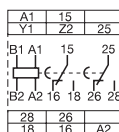


CT-YDAV

Star-delta timer with relay output

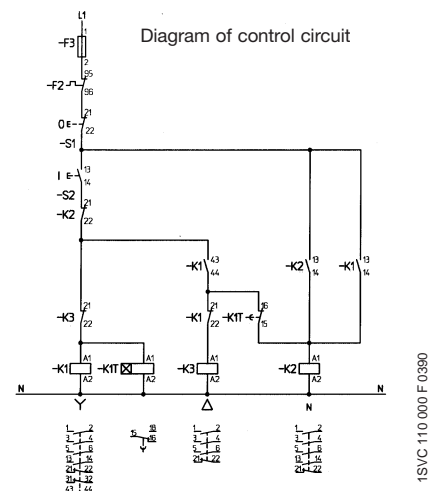
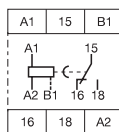


Version 380-440VAC



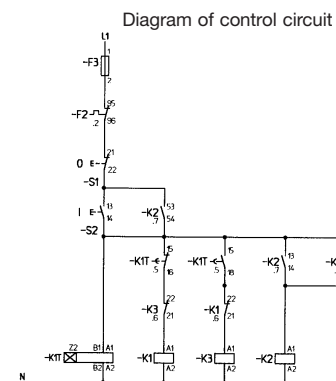
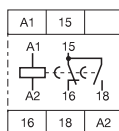
CT-YDE

Star-delta timer with relay output

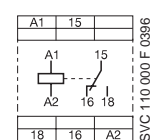


CT-SDE

Star-delta timer with relay output



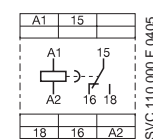
Electronic
timers



Supply voltage
versions
12-40VAC/12-60VDC
and 380-440VAC

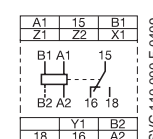
Supply voltage
versions
12-40VAC/12-60V DC
and 380-440VAC

■ CT-ARS

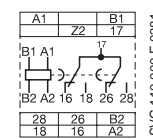


Supply voltage
versions
12-40VAC/12-60VDC
and 380-440VAC

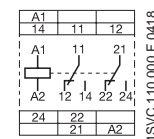
CT-AWS



CT-YDEW

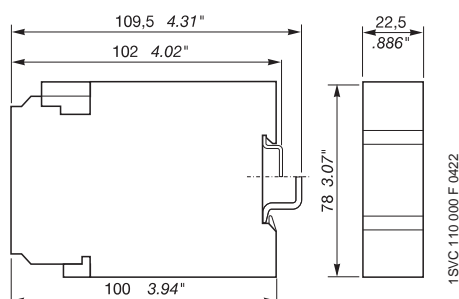


CT-IRS



Version with gold plated contacts

CT-S range



Electronic timers CT-S range

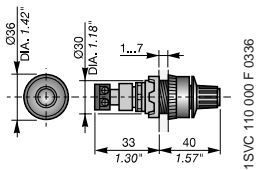
Accessories

Electronic
timers

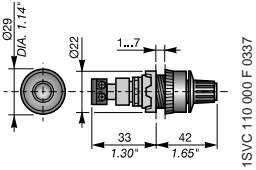
Remote potentiometer

50kΩ ±20%-0.2Ω with direct reading scale (graduated dial supplied)

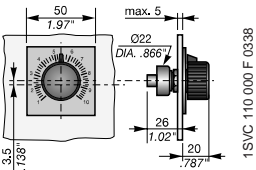
Diameter mm	Degree of protection	Order code	Pack. unit piece	Price 1 piece	Weight 1 piece kg/oz
30.5	IP65	1SVR 700 800 R 1000	1		0.040/1.4
22.5	IP65	1SVR 701 800 R 1000	1		0.040/1.4
10.5	IP40	1SVR 214 017 R 0900	1		0.040/1.4



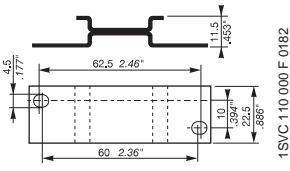
1SVR 110 000 F 0336



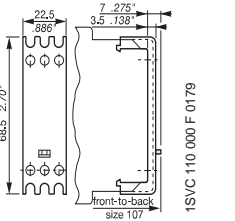
1SVR 110 000 F 0337



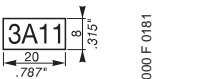
1SVR 110 000 F 0338



1SVR 110 000 F 0182



1SVR 110 000 F 0179



1SVR 110 000 F 0181

Adapter for panel mounting

Enclosure width in mm	Order code	Pack. unit piece	Price 1 piece	Weight 1 piece kg/oz
22.5	1SVR 430 029 R 0100	1		0.020/0.7

Sealable cover

Enclosure width in mm	Order code	Pack. unit piece	Price 1 piece	Weight 1 piece kg/oz
22.5	1SVR 430 005 R 0100	1		0.020/0.7

Marker

	Order code	Pack. unit piece	Price 1 piece	Weight 1 piece kg/oz
	1SVR 366 017 R 0100	1		0.020/0.7

Electronic timers

Conversion table C56xx → CT-S/CT-E ranges

Conversion table C56xx range (discontinued) to new CT-S and CT-E range

Old order code C56xx	Type	Description	Supply voltage	New order code	Type CT-	Description	Supply voltage
1SAR 330 020 R 0000	C 565	multifunction timer, 2c/o, 15 ranges (0.05s-100h)	24-240VAC/DC ->	1SVR 430 010 R 0200	CT-MFS	multifunction timer 2c/o, 10 ranges (0.05s-300h)	24-240VAC/DC
1SAR 330 020 R 0001	C 565	multifunction timer, 2c/o, 15 ranges (0.05s-100h)	24VAC/DC, ->	1SVR 430 012 R 0200	CT-MBS	multifunction timer 2c/o, 10 ranges (0.05s-300h)	24VAC/DC, 110-240VAC
1SAR 330 020 R 0002	C 565	multifunction timer, 2c/o, 15 ranges (0.05s-100h)	24VAC/DC, 200-240VAC				
1SAR 330 020 R 0009	C 565	multifunction timer, 2c/o, 15 ranges (0.05s-100h)	24VAC/DC, ->	1SVR 430 011 R 2200	CT-MBS	multifunction timer 2c/o, 10 ranges (0.05s-300h)	380-440VAC
1SAR 330 010 R 0010	C 564	multifunction timer, 1c/o, 15 ranges (0.05s-100h)	12VDC ->	1SVR 430 010 R 1100	CT-MBS	multifunction timer 1c/o, 10 ranges (0.05s-300h)	12-40VAC/ 12-60VDC
1SAR 330 010 R 0001	C 564	multifunction timer, 1c/o, 15 ranges (0.05s-100h)	24VAC/DC, ->	1SVR 430 013 R 0100	CT-MBS	multifunction timer 1c/o, 10 ranges (0.05s-300h)	24VAC/DC, 110-240VAC
1SAR 330 010 R 0002	C 564	multifunction timer, 1c/o, 15 ranges (0.05s-100h)	24VAC/DC, 200-240VAC				
1SAR 330 010 R 0000	C 564	multifunction timer, 1c/o, 15 ranges (0.05s-100h)	24-240VAC/DC ->	1SVR 550 029 R 8100	CT-MFE	multifunction timer, 1c/o 8 ranges (0.05s-100h)	24-240VAC/DC
1SAR 310 010 R 0001	C 561.00	ON-delay timer, 15 ranges (0.05s-100h), 1c/o	24VAC/DC, ->	1SVR 430 102 R 0100	CT-ERS	ON-delay timer 1c/o, 10 ranges (0.05s-300h)	24VAC/DC, 110-240VAC
1SAR 310 010 R 0002	C 561.00	ON-delay timer, 15 ranges (0.05s-100h), 1c/o	24VAC/DC, 200-240VAC				
1SAR 310 020 R 0003	C 561.01	ON-delay timer, 15 ranges (0.05s-100h), 2c/o	42-48VAC/DC, ->	1SVR 430 100 R 1200	CT-ERS	ON-delay timer 2c/o, 10 ranges (0.05s-300h)	12-40VAC/ 12-60VDC
1SAR 310 020 R 0001	C 561.01	ON-delay timer, 15 ranges (0.05s-100h), 2c/o	24VAC/DC, ->	1SVR 430 103 R 0200	CT-ERS	ON-delay timer 2c/o, 10 ranges (0.05s-300h)	24VAC/DC, 42-48VAC/DC, 110-240VAC
1SAR 310 020 R 0002	C 561.01	ON-delay timer, 15 ranges (0.05s-100h), 2c/o	100-127V AC 24VAC/DC, 200-240VAC				
1SAR 310 020 R 0000	C 561.01	ON-delay timer, 15 ranges (0.05s-100h), 2c/o	24-240VAC/DC				
1SAR 340 017 R 0006	C 562.20	true OFF-delay timer, 7 ranges (0.05s-100s),	24VAC/DC ->	1SVR 430 120 R 0100	CT-ARS	true OFF-delay timer 1c/o, 7 ranges (0.05s-10min)	24-240VAC/DC without auxiliary voltage
1SAR 340 017 R 0007	C 562.20	true OFF-delay timer, 7 ranges (0.05s-100s), 1c/o	100-127VAC/DC				
1SAR 340 017 R 0008	C 562.20	true OFF-delay timer, 7 ranges (0.05s-100s), 1c/o	200-240VAC/DC				
1SAR 340 027 R 0006	C 562.22	true OFF-delay timer, 7 ranges (0.05s-100s), 2c/o	24VAC/DC ->	1SVR 430 120 R 0300	CT-ARS	true OFF-delay timer 2c/o, 7 ranges (0.05s-10min)	24-240VAC/DC without auxiliary voltage
1SAR 340 027 R 0007	C 562.22	true OFF-delay timer, 7 ranges (0.05s-100s), 2c/o	100-127VAC/DC				
1SAR 340 027 R 0008	C 562.22	true OFF-delay timer, 7 ranges (0.05s-100s), 2c/o	200-240VAC/DC				
1SAR 350 010 R 0001	C 563	pulse generator, 7 ranges (0.05s-100h), 1c/o	24VAC/DC, ->	1SVR 430 163 R 0100	CT-TGS	pulse generator 1c/o., 2x10 ranges (0.05s-300h)	24VAC/DC, 42-48VAC/DC, 110-240VAC
1SAR 350 010 R 0002	C 563	pulse generator, 7 ranges (0.05s-100h), 1c/o	100-127VAC 24VAC/DC, 200-240VAC				
1SAR 310 011 R 0002	C 561.10	ON-delay timer, 0.5-10s, 1c/o	24VAC/DC, ->	1SVR 550 107 R 1100	CT-ERE	ON-delay timer 0.1-10s, 1c/o	24VAC/DC, 220-240VAC
1SAR 310 011 R 0001	C 561.10	ON-delay timer, 0.5-10s, 1c/o	24VAC/DC, ->	1SVR 550 100 R 1100	CT-ERE	ON-delay timer 0.1-10s, 1c/o	110-130VAC
1SAR 310 012 R 0002	C 561.10	ON-delay timer, 1.5-30s, 1c/o	24VAC/DC, ->	1SVR 550 107 R 4100	CT-ERE	ON-delay timer, 0.3-30s 1c/o	24VAC/DC, 220-240VAC
1SAR 310 012 R 0001	C 561.10	ON-delay timer, 1.5-30s, 1c/o	24VAC/DC, ->	1SVR 550 100 R 4100	CT-ERE	ON-delay timer, 0.3-30s 1c/o	110-130VAC
1SAR 310 013 R 0002	C 561.10	ON-delay timer, 5-100s, 1c/o	24VAC/DC, ->	1SVR 550 107 R 2100	CT-ERE	ON-delay timer, 3-300s, 1c/o	24VAC/DC, 220-240VAC
1SAR 310 013 R 0001	C 561.10	ON-delay timer, 5-100s, 1c/o	24VAC/DC, ->	1SVR 550 100 R 2100	CT-ERE	ON-delay timer, 3-300s, 1c/o	110-130VAC
1SAR 320 011 R 0002	C 562.10	OFF-delay timer, 0.5-10s, 1c/o	24VAC/DC, ->	1SVR 550 118 R 1100 1SVR 550 111 R 1100	CT-AHE CT-AHE	OFF-delay timer, 0.1-10s, 1c/o OFF-delay timer, 0.1-10s, 1c/o	24VAC/DC 220-240VAC
1SAR 320 011 R 0001	C 562.10	OFF-delay timer, 0.5-10s, 1c/o	24VAC/DC, ->	1SVR 550 110 R 1100	CT-AHE	OFF-delay timer, 0.1-10s, 1c/o	110-130VAC
1SAR 320 012 R 0002	C 562.10	OFF-delay timer, 1.5-30s, 1c/o	24VAC/DC, ->	1SVR 550 118 R 4100 1SVR 550 111 R 4100	CT-AHE CT-AHE	OFF-delay timer, 0.3-30s, 1c/o OFF-delay timer, 0.3-30s, 1c/o	24VAC/DC 220-240VAC
1SAR 320 012 R 0001	C 562.10	OFF-delay timer, 1.5-30s, 1c/o	24VAC/DC, ->	1SVR 550 110 R 4100	CT-AHE	OFF-delay timer, 0.3-30s, 1c/o	110-130VAC
1SAR 320 013 R 0002	C 562.10	OFF-delay timer, 5-100s, 1c/o	24VAC/DC, ->	1SVR 550 118 R 2100 1SVR 550 111 R 2100	CT-AHE CT-AHE	OFF-delay timer, 3-300s, 1c/o OFF-delay timer, 3-300s, 1c/o	24VAC/DC 220-240VAC
1SAR 320 013 R 0001	C 562.10	OFF-delay timer, 5-100s, 1c/o	24VAC/DC, ->	1SVR 550 110 R 2100	CT-AHE	OFF-delay timer, 3-300s, 1c/o	110-130VAC
1SAR 360 014 R 0002	C 561.13	star-delta timer, 1-20s, 2 delayed n/o, 50 ms	24VAC/DC, ->	1SVR 430 213 R 0200	CT-YDEW	star-delta timer 2c/o, 10 ranges (0.05s-300h)	24VAC/DC, 42-48VAC/DC, 110-240VAC
1SAR 360 014 R 0001	C 561.13	star-delta timer, 1-20s, 2 delayed n/o, 50 ms	24VAC/DC, 200-240VAC		CT-SDE	see page 7	
1SAR 360 015 R 0002	C 561.13	star-delta timer, 3-60s, 2 delayed n/o, 50 ms	24VAC/DC, 100-127VAC				
1SAR 360 015 R 0001	C 561.13	star-delta timer, 3-60s, 2 delayed n/o, 50 ms	24VAC/DC, 200-240VAC				
1SBN 020 010 R 1001	TE5S-24	star-delta timer, 0.8-60s, 2 delayed n/o, 50 ms	24VAC/DC ->	1SVR 430 213 R 0200	CT-YDEW	star-delta timer 2c/o, 10 ranges (0.05s-300h)	24VAC/DC, 42-48VAC/DC, 110-240VAC
1SBN 020 010 R 1002	TE5S-120	star-delta timer, 0.8-60s, 2 delayed n/o, 50 ms	110-120VAC		CT-SDE	see page 7	
1SBN 020 010 R 1003	TE5S-240	star-delta timer, 0.8-60s, 2 delayed n/o, 50 ms	220-240VAC				
1SBN 020 010 R 1004	TE5S-440	star-delta timer, 0.8-60s, 2 delayed n/o, 50 ms	380-440VAC				
1SAR 370 006 R 0005	C 561.02	ON-delay timer, 0.05-240s, solid-state output	24-66VAC/DC ->	1SVR 550 509 R 1000	CT-EKE	ON-delay timer 0.1-10s, solid-state output	24-240VAC/DC
1SAR 370 006 R 0004	C 561.02	ON-delay timer, 0.05-240s, solid-state output	90-240VAC/DC	1SVR 550 509 R 4000 1SVR 550 509 R 2000	CT-EKE CT-EKE	ON-delay timer 0.3-30s, solid-state output ON-delay timer 3-300s, solid-state output	24-240VAC/DC 24-240VAC/DC

Remark: 1c/o = SPDT; 2c/o = DPDT