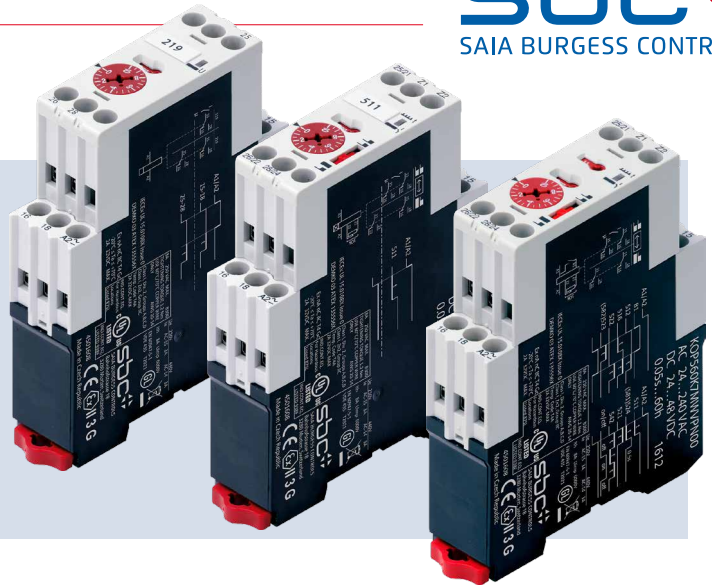


# KOP.K

## Timer, electronic

- Multi function or mono function
- To 10 time ranges
- 22.5 mm width for DIN rail
- 24...48 VDC and 24...240 VAC, 50/60 Hz
- 24...240 VAC/DC
- 1 or 2 changeover contacts, instantaneous and/or timed contacts



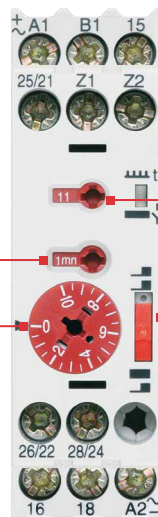
From left to right: KOP219K, KOP511K, KOP560K

		KOP.K					
Functions	Delayed operation	11			•		•
	Delayed release	12				•	•
	Delayed release after failure of operating voltage	19	•	•			
	Delayed operation and release	16				•	•
	Fleeting-on delay timer	21				•	•
	Fleeting-off delay timer	22				•	•
	Pulse converter	23				•	•
	Pulse generator	24				•	•
	Flasher relay with pulse starting	42				•	•
	On/off function for startup and maintenance					•	•
Time ranges	0.05 s...60 h				•	•	•
	0.15 s...10 min		•	•			
Operating voltage	24...48 VDC and 24...240 VAC				•	•	•
	24...240 VDC/AC		•	•		•	
Number of contact	1 changeover contact		•				
	2 changeover contacts			•			
	2 changeover contacts, instantaneous and/or timed contacts				•	•	•
Order no.		KOP119K7MMVAVN00	KOP219K7MMVAVN00	KOP511K7MMVAVN00	KOP512K7MMVAVN00	KOP560K7MMVAVN00	KOP560K7MMVAVN00

## Settings

**Rough time setting**  
e.g., 1 m = 1 minute

**Fine setting time**  
Divides the value set in the rough setting by a factor of 10 Example:  
rough setting 1 m = 1 minute  
1 unit = 6 s.  
If 24 s are necessary, factor 4 must be set here



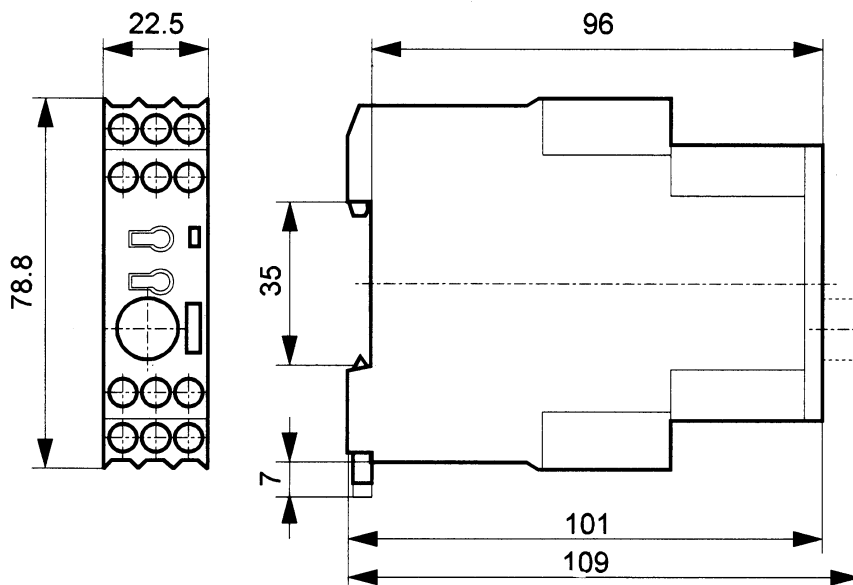
**Function settings (KOP560 only)**  
Here you can set the relay, e.g.:11 - delayed operation

Output 2 as instantaneous contact programmable by sliding switch on the front (KOP5 only)

## Technical data

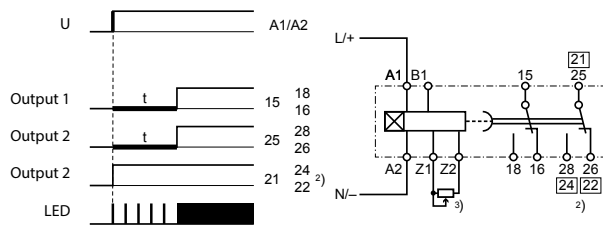
Multi time ranges	<b>KOP 5</b> 0.05...1 s, 0.15...3 s, 0.5...10 s 0.05...1 min, 0.15...3 min, 0.5...10 min 0.05...1 h, 0.15...3 h, 0.5...10 h, 3...60 h Time range can be easily selected on the front of the relay, using a screwdriver	<b>KOP119/219</b> 0.15...2.5 s, 1...10 s 8...80 s, 1...10 min
Setting accuracy	± 5% of the time range final value ( $t_{max}$ )	
Repeat accuracy	± 0.2% of the set value	
Reset time	50 ms	
Operating voltage	24...48 VDC and 24...240 VAC, 50/60 Hz (VP) 24...240 VAC/DC, 50/60 Hz (VA) ±20% (DC), -15%/+10% (AC)	24...240 VAC/DC, 50/60 Hz (VA) min. operation time 800 ms
Power consumption	VP version: 1 W (DC) or 5.0 VA (AC)	VA version: 3 VA(AC) 3 W(DC)
Duty cycle	100%	
Pulse control	Operating voltage range, current 1 mA, duration of the control pulse >30 ms (DC), >50 ms (AC); interval >50 ms (DC)	
Outputs	<b>KOP219 and KOP 5</b> 2 changeover contacts, status display by LED	<b>KOP119</b> 1 changeover contact
Switching capacity	<b>KOP 5</b> U = 440 VAC, $I_{th}$ = 8 A, P = 2000 VA 3 A/250 VAC (AC15), 3 A/440 VAC (AC14) or 1 A/24 VDC (DC13) in accordance with IEC60947-5-1 <b>KOP119/219</b> U = 440 VAC, $I_{th}$ = 5 A, P = 1200 VA 1.5 A/250 VAC (AC15) or 1 A/25 VDC (DC13) in accordance with IEC60947-5-1	
Insulation characteristics	2.5 kVAC/50 Hz test voltage in accordance with VDE 0435 and 6 kV 1.2/50 $\mu$ s surge voltage in accordance with IEC60947-5-1 between all inputs and outputs	
EMC/immunity to interference	Surge capacity in accordance with IEC61000-4-5, 4 kV Burst in accordance with IEC61000-4-4, 6 kV ESD in accordance with IEC61000-4-2, with contact 8 kV, in air 8 kV	
Secure disconnection	In accordance with VDE0106, part 101	
Protection class	Housing IP40, terminals IP20	
Approvals	UL, C-UL	
Ambient temperature	Open -20 °C to +60 °C, encapsulated -20 °C to +45 °C	
Connections	Screw terminals for 1 × 0.5 mm <sup>2</sup> or 2 × 2.5 mm <sup>2</sup> (solid wire) or 2 × 1.5 mm <sup>2</sup> (multistrand with end sleeve). AWG 14...20, with two-chamber system, M3.5 screws for Pozidrive no. 2 (Phillips) and slotted head no. 2, suitable for drill/driver (max. 1.2 Nm). Finger protection in accordance with VDE0106	
Mounting	Snap-on mounting on 35 mm rail according to EN60715TH35 or screw mounting by adapter (accessories) and 2 M4 screws. Any mounting position	

## Dimension diagrams

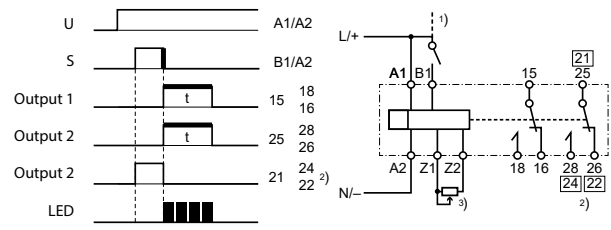


## Time diagram and connection diagram

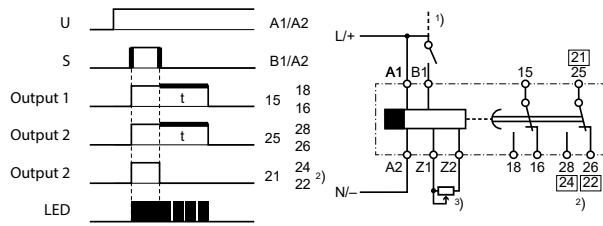
### Delayed operation (511/11)



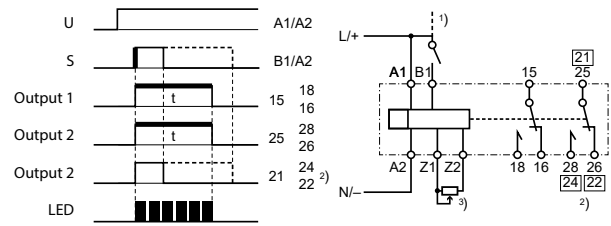
### Fleeting-off delay timer (22)



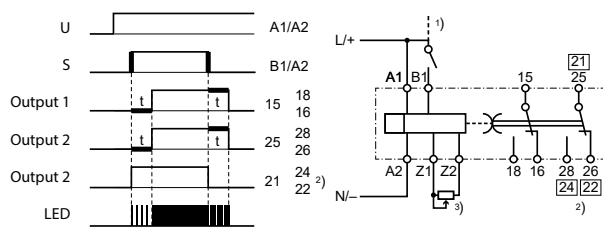
### Delayed release (512/12)



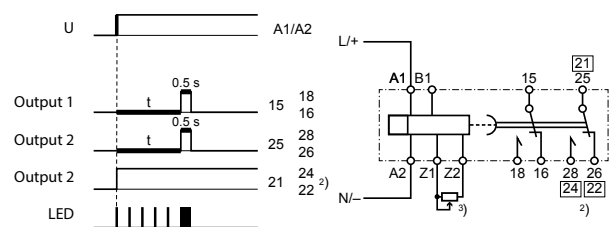
### Pulse converter (23)



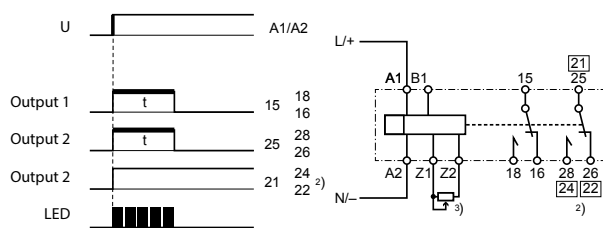
### Delayed release and operation (16)



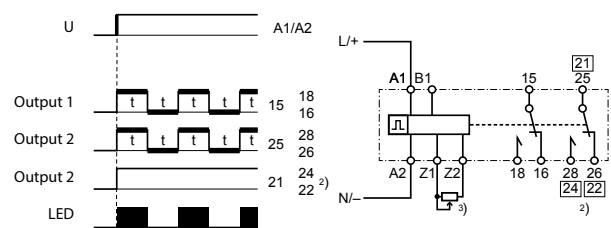
### Pulse generator (24)



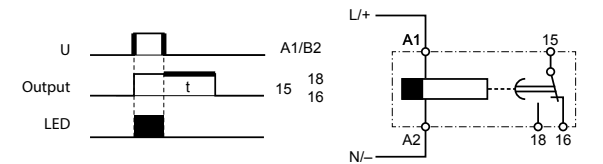
### Fleeting-on delay timer (21)



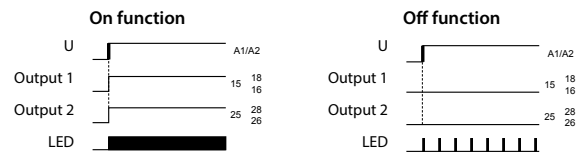
### Flasher relay with pulse starting (42)



### Delayed release after loss of operating voltage (119/219)



### KOP560: Universal timer with 10 character ranges, 8 functions (11 to 42) and an on/off function for startup and maintenance



### Function display by LED

- Output in rest position, no timing
- Output in rest position, time running
- Output in operating position, no timing
- Output in operating position, time running

<sup>1)</sup> For pulse control, a different voltage than the supply voltage can be optionally used. for example A1-A2=230 VAC and B1-A2=24 VDC.

<sup>2)</sup> Output 2 as instantaneous contact programmable by sliding switch on the front (output switches with the supply voltage U or with the control pulses S).

<sup>3)</sup> bridge or potentiometer 10 kΩ at least 0.25 W (low voltage) for external time setting.

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