

# KOP.J

## Timer

Electronic 22.5 mm

### KOP.J

Characteristics	<ul style="list-style-type: none"><li>■ 22.5 mm</li><li>■ mono or multifunction</li><li>■ high immunity to interference</li></ul>
Mounting	<ul style="list-style-type: none"><li>■ surface mounting</li><li>■ snap-on DIN rail 35 mm</li></ul>
Dimensions (mm)	22.5 x 75 x 109
Functions*	11, 12, 16, 19, 21, 22, 23, 24, 28, 31, 32, 33, 34, 41, 42, 51
Time ranges	12 time ranges, 0.05 s up to 60 h
Outputs	1 relay as change-over, 250 VAC, 8 A
Supply voltage	24...48 VDC or 24...240 VAC, 50/60 Hz



### Preferred Range

Ordering Reference	Characteristics
	<ul style="list-style-type: none"><li>■ Multi time range 1 s...60 h</li><li>■ Supply voltage 24...48 VDC &amp; 24...240 VAC</li></ul>
KOP111J7MWVPN00	Delayed operation
KOP112J7MWVPN00	Delayed release
KOP160J7MWVPN00	Universal 8 functions 111/112/116/121/122/123/124/142+on/off
KOP170J7MWVPN00	Asymmetrical impulser

\* 11: delayed operation; 12: delayed release; 16: delayed operation and release; 21: fleeting-on delay timer; 22: fleeting-off delay timer; 23: impulse converter; 24: impulse generator; 42: flasher relay; 28: watchdog; 31/70: asymmetrical timer; 51: star-delta timer; 19: power off delayed release

## Technical data

Time ranges	0.05...1 s	0.05...1 min	0.05...1 h
	0.15...3 s	0.15...3 min	0.15...3 h
	0.5...10 s	0.5...10 min	0.5...10 h
	1.5...30 s	1.5...30 min	3...60 h
	(multi-versions: time range and function selected from front with screwdriver)		
Setting accuracy	±5% of the time range final value ( $t_{max}$ )		
Repeat accuracy	±0.2% of preset value		
Reset time	50 ms		
Supply voltage	24...48 VDC or 24...240 VAC, 50/60 Hz (dual voltage)		
Voltage tolerance	±20% (DC), -15%/+10% (AC)		
Power consumption	1.5 W (DC) or 1.5 VA (AC)		
Duty cycle	100%		
Pulse control	supply voltage range, current 1 mA, duration of the control pulse >50 ms (AC), >30 ms (DC), pause >55 ms (DC)		
Output	1 relay as change-over, LED display of output status		
Switching capacity	U = 440 VAC, $I_{th} = 8$ A, P = 2000 VA 3A/250 VAC (AC 15), 3A/440 VAC (AC 14) or 1 A/24 VDC (DC 13) according to IEC		
Insulation characteristics	2 kVAC/50 Hz test voltage according to VDE0435 and 6 kV 1.2/50 ms surge voltage according to EN 60947-5-1 between all inputs and outputs		
EMC/Interference immunity	surge capacity of the power supply according to IEC 1000-4-5: 4kV 1.2/50 ms burst according to IEC 1000-4-4: 6 kV 6/50 ns ESD according to IEC 1000-4-2: at contact 8 kV, in air 8 kV electromagnetic HF field according to IEC 801-3 and electromagnetic HF signal from wiring arrangement according to IEC 801-6: level 3		
EMC/Emissions	electromagnetic fields according to EN 55022, class B		
Secure isolation	according to VDE 106, part 101		
Protection class	case IP40, terminals IP20		
Approvals	UL, C-UL		
Ambient temperature	open	-20° C to +60° C	
	enclosed	-20° C to +45° C	
Connections	screw terminals for 1 x 0.5 mm <sup>2</sup> up to 2 x 2.5 mm <sup>2</sup> (single wire) or 2 x 1.5 mm <sup>2</sup> (multistrand with end sleeve), AWG 14...20, with dual chamber system, screws M3.5 for Pozidrive no.2 (Philips) and no.2 slot, suitable for power screwdrivers (max. 1.2 Nm), finger safe according to VDE 0106		
Mounting	surface mounting; snap-on mounting on DIN rail 35 mm or screw mounting by adapter (accessory) and 2 screws M4, any mounting position		

Technical data

Circuit diagrams

Delayed operation (111)



Delayed release (112)



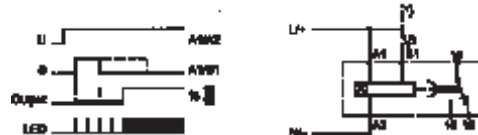
Delayed operation and release (116)



Fleeting-on delay timer (121)



Delayed operation with pulse control (118)



Fleeting-on delay timer with pulse control (128) "watchdog"



KOP 160: universal timer with 10 time ranges and 8 functions (111, 112, 116, 121, 122, 123, 124, 142) plus on/off function for commissioning and maintenance

On function



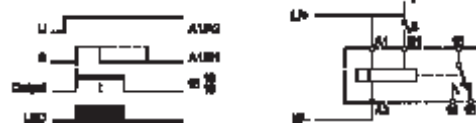
Off function



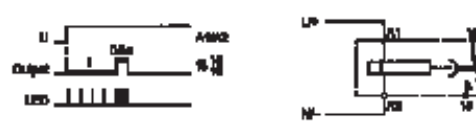
Fleeting-off delay timer (122)



Impulse converter (123)



Impulse generator (124)



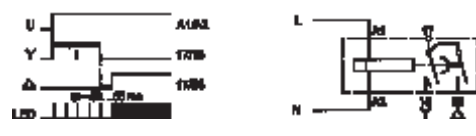
Flasher relay starting with pulse (142)



Flasher relay starting with pause (141)



Star-delta relay (251)

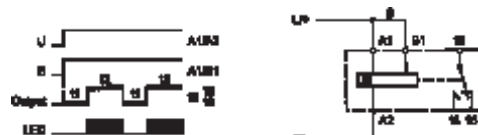


<sup>1)</sup> Another voltage than the supply voltage can also be used for pulse control, for example A1-A2 = 230 VAC and B1-A2 = 24VDC.

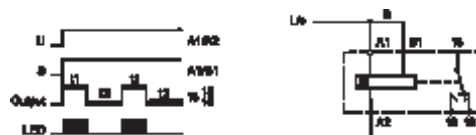
LED status display

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

With supply voltage control and starting with pause (131)



With supply voltage control and starting with pulse (132)



With pulse control and starting with pause (133)



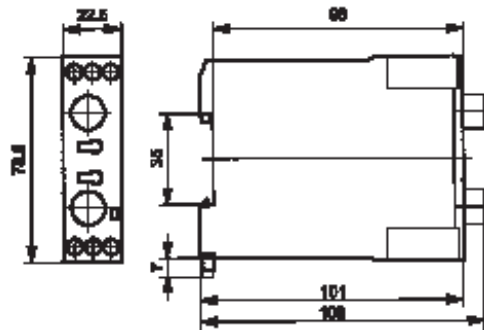
With pulse control and starting with pulse (134)



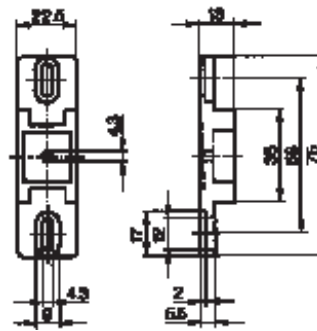
Technical data

Dimensions

Timer



Adapter for screw mounting



Ordering Reference

Type **KOP**

- Function
- 111 Delayed operation
  - 112 Delayed release
  - 116 Delayed operation and release
  - 118 Delayed operation with pulse control
  - 121 Fleeting-on delay timer
  - 122 Fleeting-off delay timer
  - 123 Impulse converter
  - 124 Impulse generator
  - 128 Fleeting-on delay timer with pulse control "watchdog"
  - 141 Flasher relay starting with pause
  - 142 Flasher relay starting with pulse
  - 160 Universal timer
  - 170 Asymmetrical impulser
  - 251 Star-delta relay

Housing **J7** 6 Terminals

Time ranges	BA 0.05...1 s	GA 0.05...1 min	NA 0.05...1 h
	CA 0.15...3 s	HA 0.15...3 min	PA 0.15...3 h
	EA 0.5...10 s	KA 0.5...10 min	RA 0.5...10 h
	FA 1.5...30 s	LA 1.5...30 min	WA 3...60 h
			MW Multi time 0.05 s...60 h

- Supply voltage
- VP 24...240 VAC & 24...48 VDC
  - M1 12 VDC
  - E9 346...440 VAC, (without UL approval)
  - VA 24...240 VAC / VDC

**N00**

Accessories **CJ260** Adapter for screw mounting