

# KOL

## Timer

Electronic 17,5 mm

### KOL

Characteristics	<ul style="list-style-type: none"><li>■ 17.5 mm</li><li>■ Multi function</li><li>■ Multi time range</li><li>■ Multi voltage</li></ul>
Mounting	<ul style="list-style-type: none"><li>■ Surface mounting</li><li>■ Snap-on DIN rail 35 mm</li></ul>
Dimensions (mm)	17.5 x 80 x 70
Functions*	11, 12, 21, 42, 51, 60
Time ranges	6 ranges 0.05 s up to 10 h
Outputs	1 contact relay, 250 VAC, 5 A
Supply voltage	24...48 VDC and 24...240 VAC, 50/60 Hz



### Preferred Range

Ordering Reference	Characteristics
	<ul style="list-style-type: none"><li>■ Multi time range 0.05 s...10 h</li><li>■ Multi voltage 24...48 VDC and 24...240 VAC</li></ul>
KOL360H7MRVFN00	Multi functions timer 311/12/21/42
KOL311H7MRVFN00	Delayed operation timer
KOL312H7MRVFN00	Delayed release timer
KOL321H7MRVFN00	Fleeting-on delay timer
KOL342H7MRVFN00	Flasher relay timer
KOL251H7MKVFN00	Star/delta timer

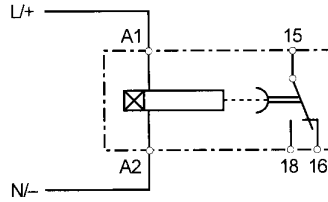
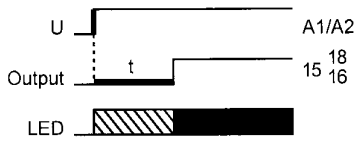
\* 11: delayed operation; 12: delayed release; 16: delayed operation and release; 21: fleeting-on delay timer; 22: fleeting-off delay timer; 23: impulse converter; 24: impulse generator; 42: flasher relay; 28: watchdog; 31/70: asymmetrical timer; 51: star-delta timer; 19: power off delayed release

## Technical data

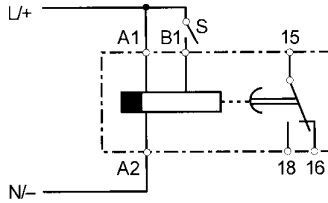
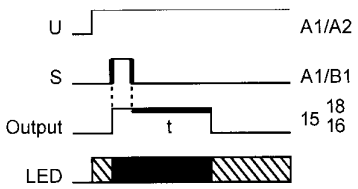
Multi time ranges	0.05...1 s    0.05...1 min    0.05...1 h 0.5...10 s    0.5...10 min    0.5...10 h
	time range and function selectable from front with screwdriver
Setting accuracy	±5% of the time range final value ( $t_{max}$ )
Repeat accuracy	1% of the time range final value ( $t_{max}$ )
Reset time	100 ms
Supply voltage	24...48 VDC and 24...240 VAC, 50/60 Hz (dual voltage)
Voltage tolerance	-15%/+20% (DC), -15%/+10% (AC)
Power consumption	0.5 W at 24 VDC, 5 VA at 240 VAC
Duty cycle	100%
Pulse control	supply voltage range, current 1 mA, duration of the control pulse >250 ms
Output	1 relay as change-over, LED display of output status
Switching capacity	U = 250 VAC, I <sub>th</sub> = 5 A, P = 1000 VA 1 A/250 VAC (AC 14) or 1 A/24 VDC (DC 13) according to IEC
Insulation characteristics	2 kVAC/50 Hz test voltage according to VDE 0435 and 4 kV 1.2/50 ms surge voltage according to EN 60947-5-1 between all inputs and outputs
EMC/Interference immunity	surge capacity according to IEC 1000-4-5, level 3; Burst according to IEC 1000-4-4, level 3; ESD according to IEC 1000-4-2, level 3
EMC/Emissions	electromagnetic fields according to EN 55022, class B
Approvals	UL, C-UL
Ambient temperature	-20°C to +50°C
Connections	screw terminals for 1 x 0.5 mm <sup>2</sup> up to 2 x 2.5 mm <sup>2</sup> , for Pozidrive no.1 (max. 1 Nm) or screwdriver, finger safe according to VDE 0106
Mounting	surface mounting; snap-on mounting on DIN rail 35 mm or screw fixing by adapter (accessory) and 2 screws M4, any mounting position

Technical data

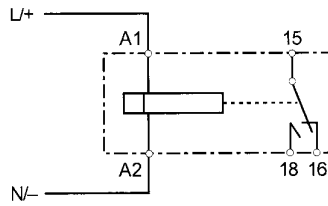
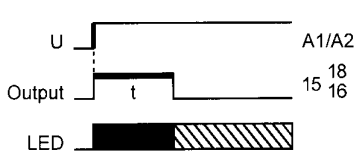
Circuit diagrams Delayed operation (11)



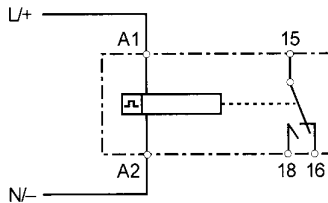
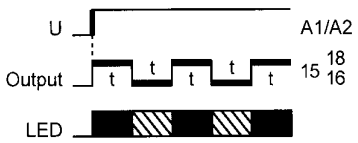
Delayed release (12)



Fleeting-on delay timer (21)

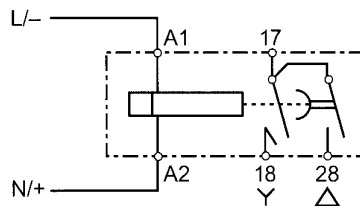
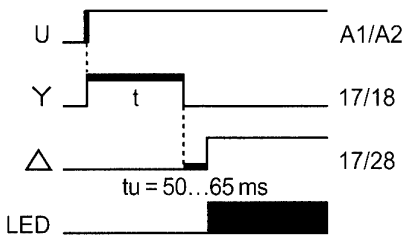


Flasher relay (42)

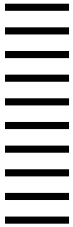


- = green LED: power on
- = orange LED: output in operating position

Star-delta relay (251)

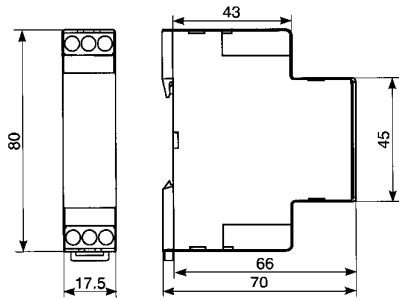


- = green LED: output in operating position

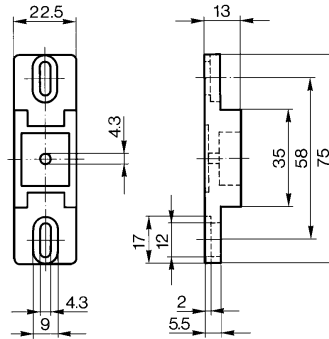


Technical data

Dimensions Timer



Adapter for screw fixing



Ordering Reference

Type **KOL**

Function	111	Mono function, 4 time range, delayed operation
	311	Mono function, 6 time range, delayed operation
	112	Mono function, 4 time range, delayed release
	312	Mono function, 6 time range, delayed release
	121	Mono function, 4 time range, Fleeting-on delay timer
	321	Mono function, 6 time range, Flasher relay
	142	Mono function, 4 time range, Flasher relay
	342	Mono function, 6 time range, Flasher relay
	160	Multi function, 4 time range
	360	Multi function, 6 time range
	251	Dual Voltage, 4 time range, Star-delta relay

Housing **H7** 6 Terminals

Time ranges	MN	Multi time 0.5 s...1 h, for KOL 112, 160
	MN	Multi time 0.75 s...1 h, for KOL 111, 121, 142
	MR	Multi time 0.05 s...10 h, for KOL3...
	MK	Multi time 0.15 s...10 min, for KOL251 only

Supply voltage	VP	24...240 VAC & 24...48 VDC, for KOL3...
	M1	12 VDC
	VM	24 VAC/VDC & 110...240 VAC for KOL1...

**NOO**

Accessories **CJ260** Adapter for screw fixing

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