

KOP.J

Timer, electronic

- Multi function or mono function
- 10 time ranges
- 22.5 mm width for DIN rail
- 24...48 VDC and 24...240 VAC
- 24...240 VAC/DC
- 1 changeover contact

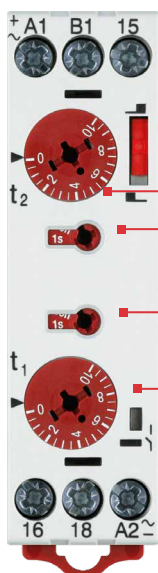


From left to right: KOP111, KOP160, KOP170

| | | KOP.J | | | | | | | |
|--------------------|---|------------------|------------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| Functions | Delayed operation | | | | | | | | |
| | Delayed release | | | | | | | | |
| | Delayed operation and release | | | | | | | | |
| | Fleeting-on delay timer | | | | | | | | |
| | Fleeting-off delay timer | | | | | | | | |
| | Pulse converter | | | | | | | | |
| | Pulse generator | | | | | | | | |
| | Flasher relay with pulse starting | | | | | | | | |
| | Asymmetrical pulse generator | | | | | | | | |
| | On/off function for startup and maintenance | | | | | | | | |
| | Watch dog | | | | | | | | |
| Time ranges | 0.05 s...60 h | | | | | | | | |
| | 0.05 s...1 s | | | | | | | | |
| | 0.15 s...3 s | | | | | | | | |
| | 0.5 s...10 s | | | | | | | | |
| Operating voltage | 24...48 VDC and 24...240 VAC | | | | | | | | |
| | 24...240 VDC/VAC | | | | | | | | |
| Number of contacts | 1 changeover contact | | | | | | | | |
| Order no. | | KOP111J7MMWVPN00 | KOP112J7MMWVPN00 | KOP128J7BAVPN00 | KOP128J7CAVPN00 | KOP128J7EAVPN00 | KOP160J7MMWVA00 | KOP160J7MMWVPN00 | KOP170J7MMWVPN00 |

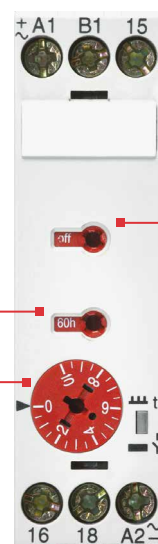
Settings

KOP170



- Start setting with pulses or with interval
- Fine setting T2
- Rough setting T2
e.g., 1 m = 1 minute
- Rough setting T1
- T1 fine setting
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

All except KOP170

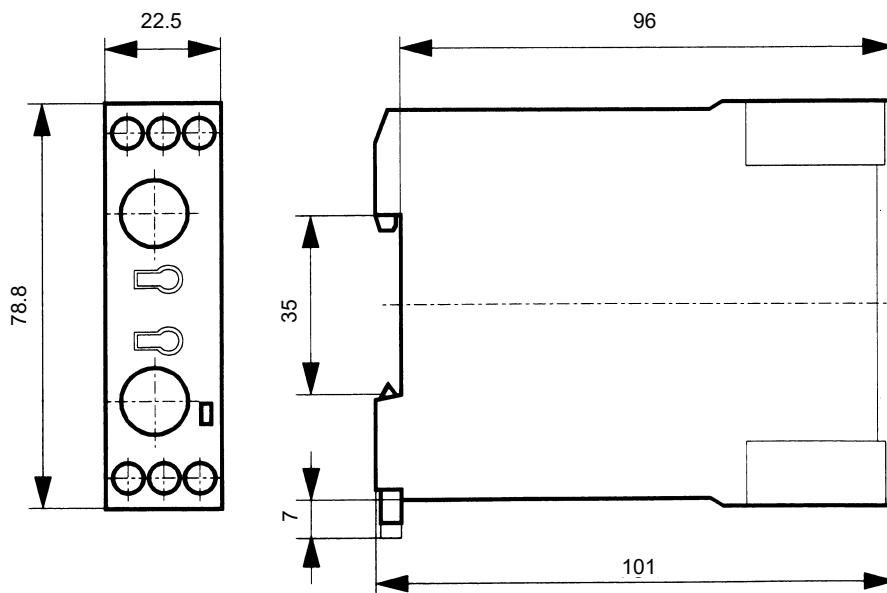


- Function settings (only with KOP160)
Here you can set the relay function, e.g.: 11 - delayed operation
- Rough setting
- Fine setting

Technical data

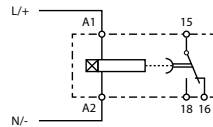
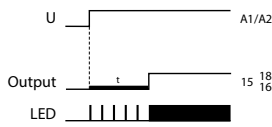
| | | |
|------------------------------|---|------------------------------|
| Multi time ranges | 0.05...1 s, 0.15...3 s, 0.5...10 s 0.05...1 min, 0.15...3 min, 0.5...10 min 0.05...1 h, 0.15...3 h, 0.5...10 h, 3...60 h Time range can be easily selected on the front of the relay, using a screwdriver | |
| Setting accuracy | ±5 % of the time range final value (t_{max}) | |
| Repeat accuracy | ±0.2% of the set value | |
| Operating voltage | 24...48 VDC and 24...240 VAC, 50/60 Hz (VP) 24...240 VAC/DC, 50/60 Hz (VA) DC: ±20% AC: -15%...+10% | |
| Power consumption | VP version: 5.0 VA(AC) 0.5 W(DC) | 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 >55 ms (DC) | |
| Outputs | 1 changeover contact, status display by LED | |
| Switching capacity | 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 | |
| Insulation characteristics | 2.5 kVAC/50 Hz test voltage in accordance with VDE 0435 and 6 kV 1.2/50 μ s surge voltage in accordance with IEC60947-5-1 between all outputs and inputs | |
| 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, GL | |
| Ambient temperature | Open -20 °C to +60 °C, encapsulated -20 °C to +45 °C | |
| Connections | Screw terminals for 1 × 0.5 mm ² or 2 × 2.5 mm ² (solid wire) or 2 × 1.5 mm ² (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

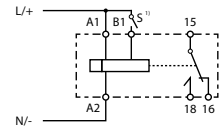
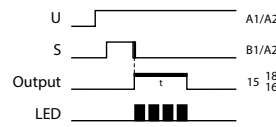


Time diagram and connection diagram

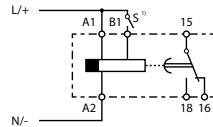
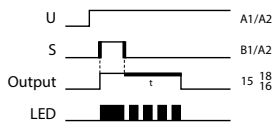
Delayed operation (11)



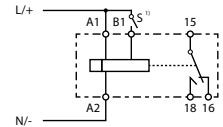
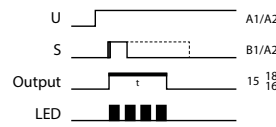
Fleeting-off delay timer (22)



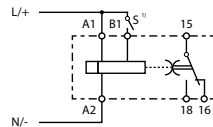
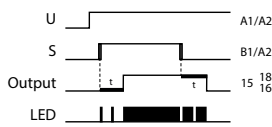
Delayed release (12)



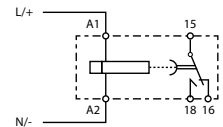
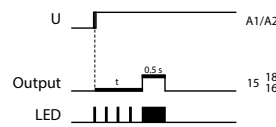
Pulse converter (23)



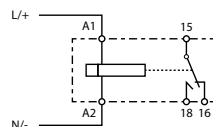
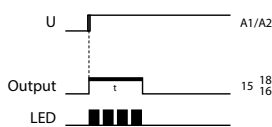
Delayed release and operation (16)



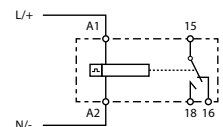
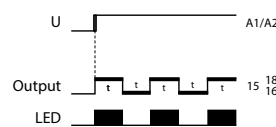
Pulse generator (24)



Fleeting-on delay timer (21)



Flasher relay with pulse starting (42)



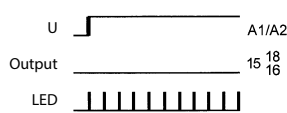
KOP160: universal timer

with 10 time ranges, 8 functions (11, 12, 16, 21, 22, 23, 24, 42) and an on/off function for startup and maintenance

On function



Off function

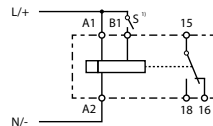
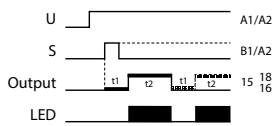


Function display by LED

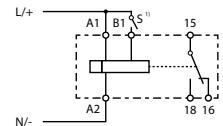
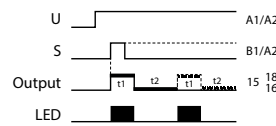
- Output in rest position, no timing
- ▬▬▬▬▬▬▬ Output in rest position, time running
- ▬▬▬▬▬▬▬ Output in operating position, no timing
- ▬▬▬▬▬▬▬ Output in operating position, time running

Asymmetrical pulse generator (70)

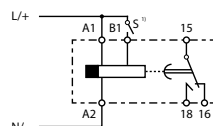
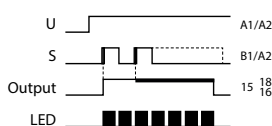
Starting with pause



Starting with pulse



Watch Dog (28)



¹⁾ 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.

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