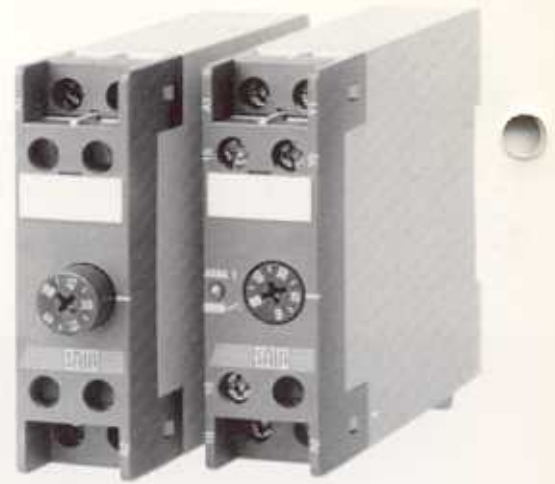


Mono-function and mono-time range



| Delayed operation timer | Delayed release timer | Delayed operation and release timer | Fleeting on delay timer |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| KOP111 | KOP112 | KOP116 | KOP121 |
| Function diagram | | | |
| Connection diagram | | | |
| Function After application of the supply voltage the output relay operates with a delay t . | After closing the control contact (terminals Y1/Y2) the output relay operates and releases after the control contact opens, with delay t . Note: Duration of control pulse min. 20 ms. If the control contact is closed during t , then t starts again after contact is opened. | After closing the control contact (terminals Y1/Y2) the output relay operates with delay t and then releases after the opening of control contact with the same delay t . Note: Duration of control pulse $> t$. Actuation of the control contact during t cancels the initiated delay time. | After application of the supply voltage the output is in the operating state during time t . |
| LED status display | - output in rest position - no timing | - output in rest position - time running | |
| Time ranges and supply voltages: See ordering details, page 7 | | See pages 16/17 for further technical details | |

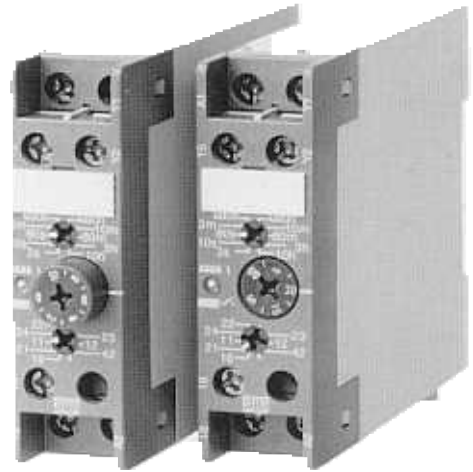
KOP.D


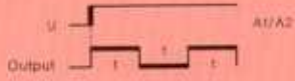
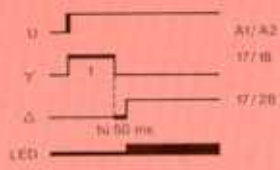
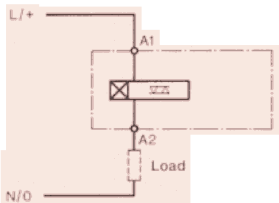
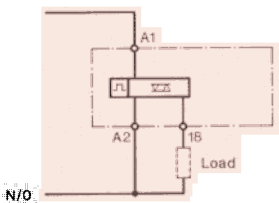
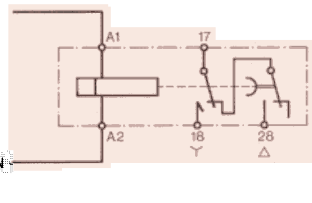
Mono-function and mono-time range

Manual time setting (protruding setting knob)
or using screwdriver (recessed setting knob)

| Fleeting off delay timer | Pulse converter | Pulse generator | Flasher relay |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KOP 122 | KOP 123 | KOP 124 | KOP 142 |
| | | | |
| | | | |
| <p>After the opening of the control contact (terminals Y1/Y2) the output is in the operating state during the time t.</p> <p>Note: Duration of control pulse min. 20 ms. Closing the control contact during t will interrupt the timing period and the output will revert to the rest state.</p> | <p>After closing the control contact (terminals Y1/Y2) the output is in the operating state during the time t. The time t is independent of the control pulse length.</p> <p>Note: Duration of control pulse min. 20 ms. Actuations of the control contact during t are disregarded. No new cycle cannot be started until after the expiry of t.</p> | <p>After application of the supply voltage the output relay operates with delay t for the fixed pulse duration of 0.5 s.</p> | <p>After application of the supply voltage the output is in the operating state for the time t (starting with a pulse) and is subsequently in the rest state for the same time t. Further periods follow until the supply voltage is removed.</p> |
| | | | |

Multi(8)function and multi(8)time range Special timer



| Universal timer | Delayed operation timer with semiconductor output | Flasher relay with semiconductor output | Star-delta relay |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KOP 160 | KOP 711 | KOP 742 | KOP 251 |
| <p>Function diagram</p> <p>The 8 functions of the KOP111 to KOP142 and 8 time ranges are combined in this universal timer and can be selected from the front using a screwdriver.</p> <p>See KOP111 to KOP142 diagrams, pages 4/5</p> |  |  |  |
| <p>Connection diagram</p> <p>See mono-function timers KOP111 to KOP142, pages 4/5</p> |  |  |  |
| <p>Function</p> <p>Function descriptions and notes as for the relevant mono-function timer.</p> <p>See KOP111 to KOP142, pages 4/5</p> <p>Status display</p> <p>See KOP111 to KOP142, pages 4/5</p> | <p>After application of the supply voltage the semiconductor conducts with delay t.</p> <p>Note: Contact rating, leakage current, voltage drop see «Technical Data», page 17.</p> | <p>After application of the supply voltage the semiconductor conducts during the time t and is non-conducting during the follow-on period. Further periods follow until the supply voltage is removed.</p> <p>Note: Contact rating, leakage current, voltage drop see «Technical Data», page 17.</p> | <p>After application of the supply voltage, output Υ (terminal 18) operates and then releases after expiry of the time t. Then, after t_d 50 ms, the output Δ terminal 28 switches on and stays on until the supply voltage is removed. The changeover is inherently short-circuit-proof.</p> |

See pages 16/17 for further technical data

Time ranges and supply voltages: See ordering details, page 7

KOPD

Multi-function and multi-time range

- Functions and time ranges selectable with screwdriver.
- The outputs can be brought to the rest or operating states for commissioning with the function selector switch.
- Manual time setting (protruding setting knob) or using screwdriver (recessed setting knob).

Ordering details



Function (see summary list, pages 4...6)

Time setting knob

- 0 Standard knob (protruding, manual setting)
- 7 Flat knob (recessed, setting with screwdriver)

| Time range | KOP. | 111...142 | 711/742 | 251 | 160 |
|---------------|------|-----------|---------|-----|-----|
| 0.05... 1 s | BA | BA | — | — | — |
| 0.15... 3 s | CA | — | — | — | MR |
| 0.5 ...10 s | EA | EA | — | — | MR |
| 1.5 ...30 s | FA | — | — | FA | — |
| 3 ...60 s | GA | GA | — | — | MR |
| 0.15... 3 min | HA | — | — | HA | MR |
| 0.5 ...10 min | KA | KA | — | — | MR |
| 1.5 ...30 min | LA | — | — | — | — |
| 3 ...60 min | NA | NA | — | — | MR |
| 0.15... 3 h | PA | — | — | — | MR |
| 0.5 ...10 h | RA | — | — | — | MR |

Supply voltage (AC: 50/60 Hz)

| KOP 111...142/160/251 | KOP 711 |
|-----------------------|--------------------|
| BK 24 V AC/DC | V5 24- 36 V AC/DC |
| BR 36 V AC/DC | V6 42- 60 V AC/DC |
| BW 42 V AC/DC | V7 110-250 V AC/DC |
| CA 48 V AC/DC | |
| CD 60 V AC/DC | |

| KOP 742 |
|----------------|
| V4 24- 36 VDC |
| V1 24- 36 VAC |
| V2 42- 60 VAC |
| V3 110-250 VAC |

Approvals UL and CSA indicate with the order

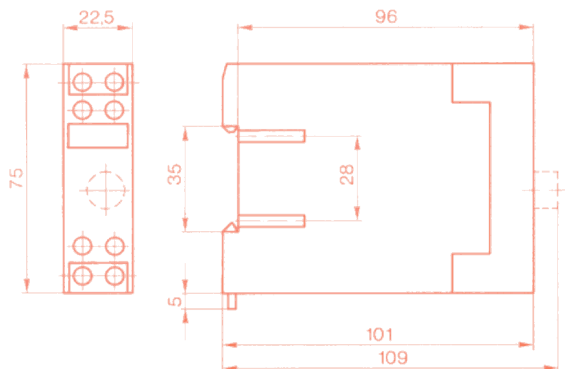
1) Without UL and CSA approvals

Ordering can be by means of the above ASN-code or by description.

Example: Electronic timer KOP 111 D, with standard knob,
0.15...3 s, 24 VDC
or
KOP 111 D0 CABKN

Accessories (to be ordered separately): Screw adaptor CJ 260

Dimensional drawings



Accessories (adaptor for screw mounting CJ 260)

The adaptor is to be fixed with 2×M4 screws. The timer can then be simply snapped in position. This fixing mode increases the overall depth by 5 mm.

