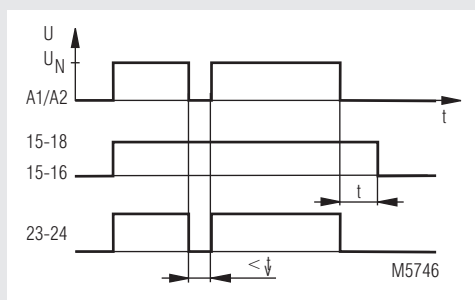


MINITIMER Timer, Release Delay MK 9961



- According to IEC/EN 61 812-1
- Delay up to 600 s
- Repeat accuracy $< \pm 1 \%$
- Without auxiliary voltage
- Available with instantaneous contact
- Safe resetting
- Remote potentiometer connection to terminal Z1 - Z2 possible
- 2-wire proximity sensor control
- Width 22.5 mm

Function Diagram



Approvals and Marking



* see variant

Indication

LED: on when operating voltage applied

Technical Data

Time Circuit

| | | |
|---------------------|--------------|--------------|
| Time ranges: | 0.05 ... 1 s | 3 ... 60 s |
| | 0.15 ... 3 s | 5 ... 100 s |
| | 0.5 ... 10 s | 15 ... 300 s |
| | 1.5 ... 30 s | 30 ... 600 s |

Time setting:

infinitely, on absolute scale
remote setting via external potentiometer

Repeat accuracy:

$< \pm 1 \%$

Min. setting time:

80 ms

Voltage influence:

$< \pm 1.5 \%$

Temperature influence:

$< 0.1 \%$ / K

Input

| | |
|--|---|
| Nominal voltage U_N: | AC/DC 24, 42 V with polarity protection AC 110 ... 127, 230, 240 V |
| Voltage range: | 0.8 ... 1.1 U_N |
| Permissible residual current: | 10 mA |
| Nominal consumption: | AC 230 V / 9 VA |
| Nominal frequency: | 50 / 60 Hz |

Output

Contacts

| | |
|-------------|--|
| MK 9961.81: | 1 changeover contact, delayed |
| MK 9961.35: | 1 NO contact, instantaneous 1 changeover contact, delayed |

Thermal current I_{th}

| | |
|-------------|-----|
| MK 9961.81: | 5 A |
| MK 9961.35: | 2 A |

Switching capacity

to AC 15

| | | |
|-------------|----------------|-------------------|
| NO contact: | 3 A / AC 230 V | IEC/EN 60 947-5-1 |
| NC contact: | 1 A / AC 230 V | IEC/EN 60 947-5-1 |

Electrical life

to AC 15 at 3 A, AC 230 V

| | |
|-------------|--------------------------------------|
| MK 9961.81: | 5 x 10 ⁵ switching cycles |
| MK 9961.35: | 3 x 10 ⁵ switching cycles |

Permissible switching frequency:

3 000 switching cycles / h

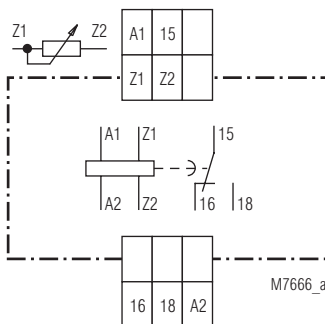
Short circuit strength

max. fuse rating: 4 A gL IEC/EN 60 947-5-1

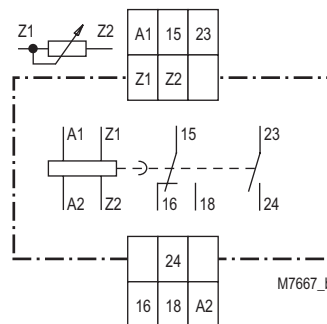
Mechanical life:

50 x 10⁶ switching cycles

Circuit Diagrams



MK 9961.81



MK 9961.35

Technical Data

General Data

| | | |
|--|--|-------------------|
| Operating mode: | Continuous operation | |
| Temperature range: | - 20 ... + 60 °C | |
| Clearance and creepage distances | | |
| rated impuls voltage / pollution degree: | 4 kV / 2 | IEC 60 664-1 |
| EMC | | |
| Electrostatic discharge: | 8 kV (air) | IEC/EN 61 000-4-2 |
| HF irradiation: | 10 V/m | IEC/EN 61 000-4-3 |
| Fast transients: | 2 kV | IEC/EN 61 000-4-4 |
| Surge voltages between wires for power supply: | 2 kV | IEC/EN 61 000-4-5 |
| between wire and ground: | 4 kV | IEC/EN 61 000-4-5 |
| Interference suppression: | Limit value class B | EN 55 011 |
| Degree of protection | | |
| Housing: | IP 40 | IEC/EN 60 529 |
| Terminals: | IP 20 | IEC/EN 60 529 |
| Housing: | Thermoplast with V0 behaviour according to UL subj. 94 | |
| Vibration resistance: | Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60 068-2-6 | |
| Climate resistance: | 20 / 060 / 04 IEC/EN 60 068-1 | |
| Terminal designation: | EN 50 005 | |
| Wire connection: | 2 x 1.5 mm ² solid or 2 x 1.0 mm ² stranded wire with sleeve DIN 46 228-1/-2/-3/-4 | |
| Wire fixing: | Flat terminals with self-lifting clamping piece IEC/EN 60 999-1 | |
| Mounting: | DIN rail IEC/EN 60 715 | |
| Weight: | 140 g | |

Dimensions

Width x height x depth: 22.5 x 82 x 99 mm

Standard Type

| | |
|-----------------------------------|----------------------|
| MK 9961.81 AC 230 V 50/60 Hz 10 s | |
| Article number: | 0021491 stock item |
| • Output: | 1 changeover contact |
| • Nominal voltage U_N : | AC 230 V |
| • Time range: | 0.5 ... 10 s |
| • Width: | 22.5 mm |

Variant

MK 9961/61: with UL-approval

Ordering example of variant

| | | | | | | |
|---------|-----|---|----------|----------|-------|-----------------------|
| MK 9961 | .81 | / | AC 230 V | 50/60 Hz | 100 s | |
| | | | | | | Time range, end value |
| | | | | | | Nominal frequency |
| | | | | | | Nominal voltage |
| | | | | | | Variant, if required |
| | | | | | | Contacts |
| | | | | | | Type |

Accessories

AD 3:

External potentiometer

| | | | |
|-----|----|---------------|-------|
| 1 | MΩ | at time range | 1 s |
| 1 | MΩ | at time range | 3 s |
| 1 | MΩ | at time range | 10 s |
| 4.7 | MΩ | at time range | 30 s |
| 10 | MΩ | at time range | 60 s |
| 10 | MΩ | at time range | 100 s |
| 20 | MΩ | at time range | 300 s |
| 20 | MΩ | at time range | 600 s |

Degree of protection front side:

IP 60

