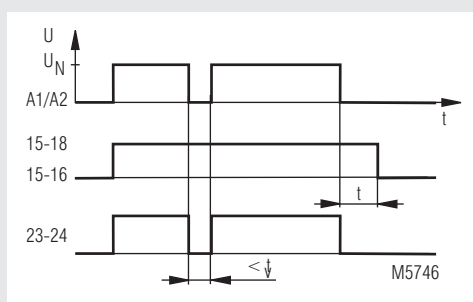


## MINITIMER Timer, Release Delay MK 9961



- 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

<b>Time ranges:</b>	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

<b>Nominal voltage <math>U_N</math>:</b>	AC/DC 24, 42 V with polarity protection AC 110 ... 127, 230, 240 V
<b>Voltage range:</b>	0.8 ... 1.1 $U_N$
<b>Permissible residual current:</b>	10 mA
<b>Nominal consumption:</b>	AC 230 V / 9 VA
<b>Nominal frequency:</b>	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 <sup>5</sup> switching cycles
MK 9961.35:	3 x 10 <sup>5</sup> switching cycles

#### Permissible switching

frequency:

3 000 switching cycles / h

#### Short circuit strength

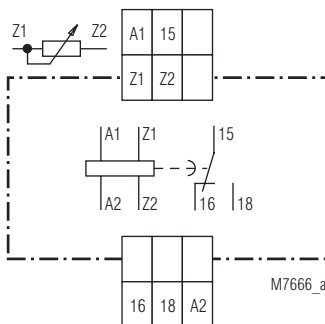
max. fuse rating:

4 A gL IEC/EN 60 947-5-1

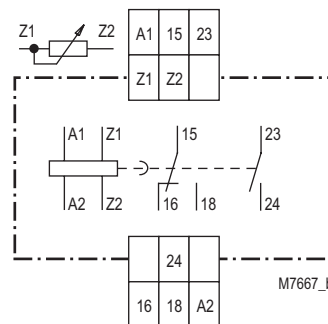
#### Mechanical life:

50 x 10<sup>6</sup> switching cycles

### Circuit Diagrams



MK 9961.81



MK 9961.35

## Technical Data

### General Data

<b>Operating mode:</b>	Continuous operation	
<b>Temperature range:</b>	- 20 ... + 60 °C	
<b>Clearance and creepage distances</b>		
rated impuls voltage / pollution degree:	4 kV / 2	IEC 60 664-1
<b>EMC</b>		
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
<b>Degree of protection</b>		
Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529
<b>Housing:</b>	Thermoplast with V0 behaviour according to UL subj. 94	
<b>Vibration resistance:</b>	Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60 068-2-6	
<b>Climate resistance:</b>	20 / 060 / 04 IEC/EN 60 068-1	
<b>Terminal designation:</b>	EN 50 005	
<b>Wire connection:</b>	2 x 1.5 mm <sup>2</sup> solid or 2 x 1.0 mm <sup>2</sup> stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1	
<b>Mounting:</b>	DIN rail IEC/EN 60 715	
<b>Weight:</b>	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

