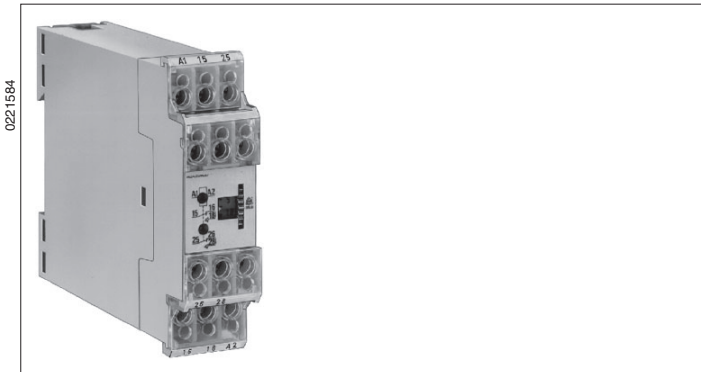


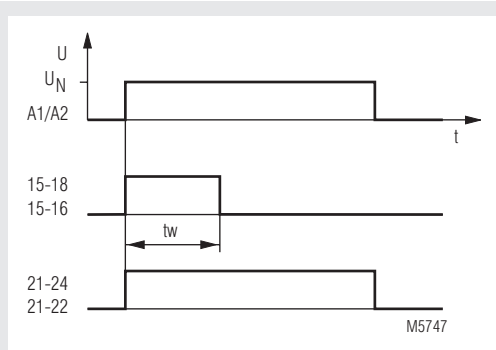
## MINITIMER

Fleeting Action Timer, adjustable  
MK 9989



- According to IEC/EN 61 812-1
- Fleeting make
- Fleeting time up to 300 s or on request
- Repeat accuracy  $< \pm 0,5 \%$
- Setting on absolute scale
- Available as 2-voltage version
- LED displays for availability and contact position
- 2 fleeting make or  
1 fleeting make and 1 non-delayed changeover contact
- Also available with instantaneous contact
- Also available with CSA approval
- Width 22.5 mm

### Function Diagram



### Approvals and Marking



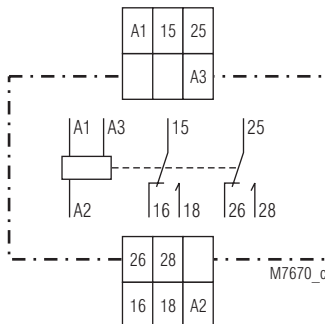
### Applications

Time-dependent circuits

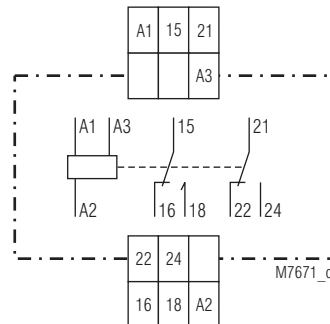
### Indicators

upper LED: on, when supply connected  
lower LED: on, when output relay active

### Circuit Diagrams



MK 9989



MK 9989.77

### Technical Data

#### Time circuit

**Time ranges:**

0.05 ... 1 s	1.5 ... 30 s
0.15 ... 3 s	5 ... 100 s
0.5 ... 10 s	15 ... 300 s

Other time ranges on request  
Stepless on absolute scale

#### Time setting: Recovery time

tw 50 / 100:

< 40 ms

#### Repeat accuracy:

<  $\pm 0.5 \%$  of full-scale value

#### Voltage influence:

$\leq 1 \%$

#### Temperature influence:

$\pm 0.1 \%$  / K

### Input

#### Nominal voltage $U_N$ :

AC/DC 24 V<sup>1)</sup> + AC 110 ... 127 V<sup>2)</sup>  
AC/DC 24 V<sup>1)</sup> + AC 230 ... 240 V<sup>2)</sup>

<sup>1)</sup> at terminals A3 - A2

<sup>2)</sup> at terminals A1 - A2

also available single voltage version:

AC/DC 12 V, AC/DC 42 ... 48 V

#### Voltage range:

AC 0.8 ... 1.1  $U_N$

DC 0.9 ... 1.25  $U_N$

#### Release voltage:

15 %  $U_N$

#### Nominal power consumption:

AC 230 V DC 24 V DC 42 V

8.5 VA 1 W 1 W

#### Nominal frequency:

50 / 60 Hz

#### Frequency range:

$\pm 5 \%$   $f_N$

#### Permissible residual current:

5 mA

## Technical Data

### Output

### Contacts

MK 9989:	2 fleeting make (changeover contacts)
MK 9989.77:	1 fleeting make (changeover contact) 1 non-delayed changeover contact

### Thermal current $I_{th}$ :

5 A

### Switching capacity

to AC 15:

NO contact:	3 A / AC 230 V	IEC/EN 60 947-5-1
NC contact:	2 A / AC 230 V	IEC/EN 60 947-5-1

### Electrical life

to AC 15 at 3 A, AC 230 V: 5 x 10<sup>5</sup> switching cycles IEC/EN 60 947-5-1

### Permissible switching frequency:

6 000 switching cycles / h

### Short-circuit strength

max. fuse rating: 6 A gL IEC/EN 60 947-5-1

### Mechanical life:

> 30 x 10<sup>6</sup> switching cycles

## General Data

### Operating mode:

Continuous operating

### 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: 4 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

HF-wire guided: 10 V IEC/EN 61 000-4-6

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:

Thermoplastic with V0 behaviour according to UL Subject 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<sup>2</sup> solid or  
2 x 1.0 mm<sup>2</sup> 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 9989 AC/DC 24 V + AC 220 ... 240 V 50/60Hz 10 s

Article number: 0044947 stock item

- Output: 2 fleeting make (changeover contacts)
- Nominal voltage  $U_N$ : AC/DC 24 V + AC 220 ... 240 V
- Time range: 0.5 ... 10 s
- Width: 22.5 mm

## Ordering example

MK 9989 .77 AC/DC 24 V + AC 230 ... 240 V 50 / 60 Hz 30 s

