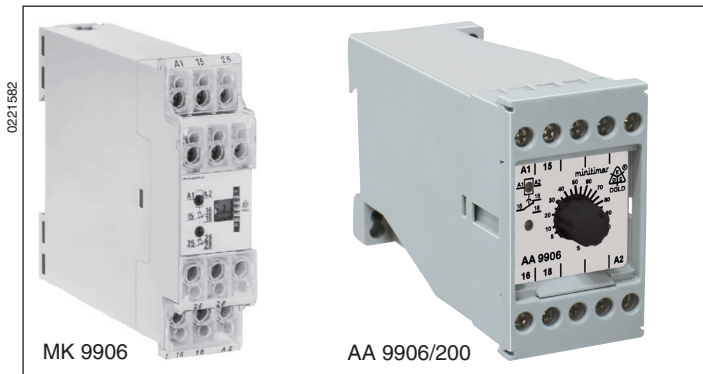


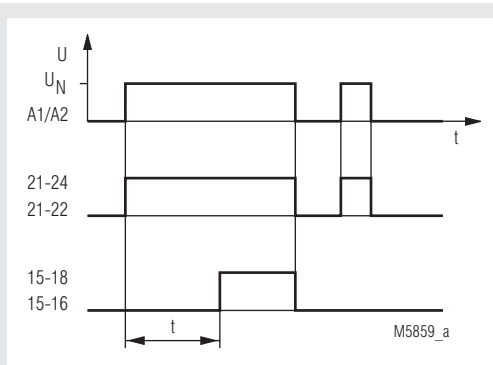
MINITIMER

Timer, On Delayed
MK 9906, AA 9906/200



- According to IEC/EN 61 812-1
- Time delay of 0.05 s ... 100 h
- Repeat accuracy $\leq \pm 0.5 \%$
- Adjustable on absolute scale
- MK 9906 as a 2-voltage version
- AA 9906/200 with wide input range AC/DC 24 ... 240 V
- Available with instantaneous contact
- LED indicators for operation and contact position
- Controllable by proximity sensors
- 2 changeover contacts
- MK 9906: width 22.5 mm
- AA 9906/200: width 45 mm

Function Diagram



Approvals and Markings



* see variants

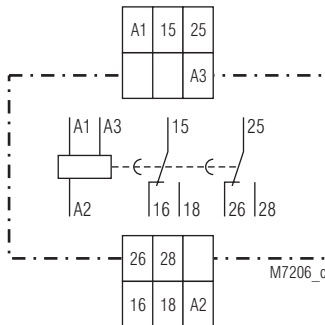
Application

Time-dependent controllers

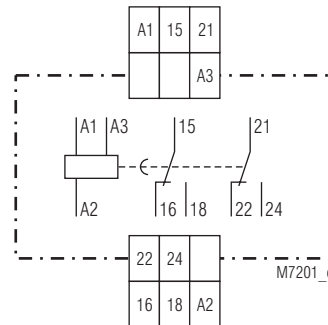
Indicators

upper LED: on, when supply connected
lower LED: on, when output relay active (contact 15-18 closed)

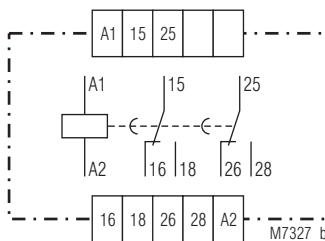
Circuit Diagrams



MK 9906.82



MK 9906.32



AA 9906.82/200

Technical Data

Time Circuit

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

Time setting: stepless on an absolute scale
Recovery time: tw 50 / 100: 40 ms
Repeat accuracy: $\leq \pm 0.5 \%$ of the scale limit value
Voltage influence: $\leq 1 \%$
Temperature influence: $< 0.1 \%$ / K

Input

Nominal voltage U_N :

MK 9906: AC/DC 24 V ¹⁾ + AC 110 ... 127 V ²⁾
AC/DC 24 V ¹⁾ + AC 230 ... 240 V ²⁾
also available as single-voltage version
AC/DC 12 V, AC/DC 42 ... 48 V
¹⁾ at terminals A3 - A2
²⁾ at terminals A1 - A2

AA 9906/200: AC/DC 24 ... 240 V

Voltage range:
MK 9906: AC 0.8 ... 1.1 U_N
DC 0.9 ... 1.25 U_N

AA 9906/200: AC 19 ... 264 V
DC 19 ... 300 V

Technical Data

| | | | |
|--------------------------------------|--------------------|----------------|----------------|
| Nominal consumption: | AC 230 V 8.5 VA | DC 24 V 1 W | DC 42 V 1 W |
| Nominal frequency: | 50 / 60 Hz | | |
| Frequency range | ± 5 % f_N | | |
| Resetting voltage: | 15 % U_N | | |
| Permissible residual current: | 5 mA | | |

Output

Contacts

| | | |
|-------------|--|--|
| MK 9906: | 2 changeover contacts | |
| MK 9906.32: | 1 changeover contact, non-delayed 1 changeover contact, delayed | |

AA 9906.82/200: 2 changeover contacts

Release time: 30 ms

Thermal current I_{th} : 5 A

Switching capacity

to AC 15

MK 9906

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

AA 9906/200

NO contact: 10 A / AC 230 V IEC/EN 60 947-5-1

NC contact: 5 A / AC 230 V IEC/EN 60 947-5-1

Electrical life IEC/EN 60 947-5-1

to AC 15 at 3 A, AC 230 V: 5 x 10⁵ switching cycles

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 10⁶ switching cycles

General Data

Operating mode: Continuous operation

Temperature range

MK 9906: - 20 ... + 60 °C

AA 9906/200: - 40 ... + 60 °C

Clearance and creepage distances

rated impulse voltage /

pollution degree:

Input/output: 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: 1 kV IEC/EN 61 000-4-5

between wire and ground: 2 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

20 / 060 / 04 IEC/EN 60 068-1

EN 50 005

Terminal designation:

Wire connection:

MK 9906: 2 x 1.5 mm² solid or
2 x 1.0 mm² stranded wire with sleeve
DIN 46 228-1/-2/-3/-4

AA 9906/200: 2 x 2.5 mm² solid or
2 x 1.5 mm² 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

DIN rail IEC/EN 60 715

Mounting:

Weight

MK 9906: 140 g

AA 9906/200: 160 g

Dimensions

Width x height x depth

MK 9906: 22.5 x 82 x 99 mm

AA 9906/200: 45 x 77 x 127 mm

Standard Types

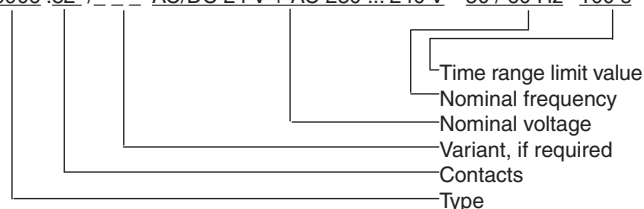
| | | |
|---------------------------|-------------------------------|--------------|
| MK 9906 | AC/DC 24 V + AC 220 ... 240 V | 0.5 ... 10 s |
| Article number: | 0044853 | stock item |
| • Output: | 2 changeover contacts | |
| • Nominal voltage U_N : | AC/DC 24 V + AC 220 ... 240 V | |
| • Width: | 22.5 mm | |
| AA 9906.82/200 | AC/DC 24 ... 240 V | 1,5 ... 30 s |
| Article number: | 0039285 | |
| • Output: | 2 changeover contacts | |
| • Nominal voltage U_N : | AC/DC 24 ... 240 V | |
| • Width: | 45 mm | |

Variants

| | |
|-----------------|---|
| MK 9906.83: | AC 230 ... 240 V 3 changeover contacts |
| MK 9906.81/007: | to be used as star-delta timer resetting time of contacts approx. 100 ms, AC 230 V, 1 changeover contact |
| MK 9906.82/008: | DC 24 V, 2 changeover contacts Make current: ≤ 100 mA, typ. at DC 24 V: 80 mA Recovery time: t_w 50/100: ≤ 20 ms (suitable to be controlled by reed contacts) |
| MK 9906.82/61: | with UL-approval, 2 changeover contacts |

Ordering example for variants

MK 9906 .82 / - - - AC/DC 24 V + AC 230 ... 240 V 50 / 60 Hz 100 s



Accessories

| | |
|------------------|--|
| for MK 9906: | |
| ET 4752-143 | Marking plate Article number: 0043203 |
| for AA 9906/200: | |
| K 70-34 | Cover Article number: 0011790 |