



Your Advantages

- For different time ranges
- Simplified storage
- High accuracy

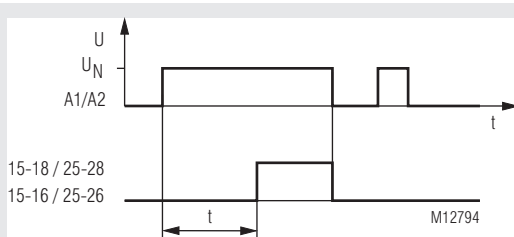
Features

- Power ON-delay relay according to EN 61812-1
- Delay from 0.05 s ... 100 h
- Repeat accuracy $\leq \pm 0.5\%$
- Setting on absolute scale
- LED indicators for operation and state of contacts
- Controlled with 2-wire initiators
- 2 changeover contacts
- Wire connection: Also 2 x 1.5 mm² stranded ferruled, or 2 x 2.5 mm² solid DIN 46228-1/-2/-3/-4
- As option with pluggable terminal blocks for easy exchange of devices
 - With screw terminals
 - Or with cage clamp terminals
- Width: 22.5 mm

Product Description

The timer MK 9906N/600 can be used to switch devices and controls with an adjustable on delay. With these timer the start behaviour of machine parts e. g. the starting of motors can be influenced. With a potentiometer the time delay can be adjusted simply over a large setting range.

Function Diagram



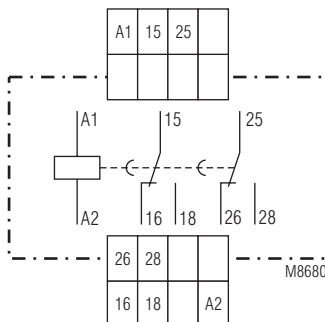
Approvals and Markings



Applications

Time-dependent controllers

Circuit Diagrams



MK 9906N.82/600

Indicators

- Upper LED: On when supply connected
- Lower LED: On, when corresponding output relay is active (contact 15 - 18 closed)

Connection Terminals

Terminal designation	Signal Description
A1	L / +
A2	N / -
15, 16, 18	Changeover contact
25, 26, 28	Changeover contact

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	0.15 ... 3 h
	3 ... 60 s	0.5 ... 10 h
	5 ... 100 s	1.5 ... 30 h
	15 ... 300 s	5 ... 100 h

Time setting: Stepless, setting on absolute scale

Recovery time

tw 50 / 100: 40 ms

Repeat accuracy: $\leq \pm 0.5\%$ end of scale value

Voltage influence: $\leq 1\%$

Temperature influence: $< 0.1\%$ / K

Input

Nominal voltage U_N : DC 24 V,
AC 110 ... 127 V,
AC 230 V

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

Nominal consumption: AC 230 V DC 24 V
8.5 VA 1 W

Nominal frequency: 50 / 60 Hz

Frequency range: $\pm 5\%$ f_N

Release voltage: 15% U_N

Permissible residual current: 5 mA

Output

Contacts: 2 changeover contacts

Contact material: AgSnO₂

Measured nominal voltage: AC 250 V

Release time: 30 ms

Thermal current I_{th} : 5 A

Switching capacity

to AC 15

NO contact: 3 A / AC 230 V IEC/EN 60947-5-1

NC contact: 1 A / AC 230 V IEC/EN 60947-5-1

Electrical life

To AC 15 at 3 A, AC 230 V: 5 x 10⁵ switch. cycles IEC/EN 60947-5-1

Permissible switching frequency: 6000 switching cycles / h

Short circuit strength

max. fuse rating: 6 A gG / gL IEC/EN 60947-5-1

Mechanical life: $> 30 \times 10^5$ switching cycles

General Data

Operating mode: Continuous operation

Temperature range

Operation: - 20 ... + 60 °C

Storage: - 25 ... + 65 °C

Relative air humidity: 93 % at 40 °C

Altitude: ≤ 2000 m

Clearance and creepage distances

Rated impulse voltage /

Pollution degree

Input / Output: 4 kV / 2 (basis insulation) IEC 60664-1

Output / Output: 4 kV / 2 (basis insulation) IEC 60664-1

Overvoltage category: III

Insulation test voltage,
type test: 2,5 kV; 1 min

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61000-4-2

HF irradiation

80 MHz ... 2.7 GHz: 10 V / m IEC/EN 61000-4-3

Fast transients: 4 kV IEC/EN 61000-4-4

Surge voltage

between

wires for power supply: 1 kV IEC/EN 61000-4-5

Between wire and ground: 2 kV IEC/EN 61000-4-5

HF-wire guided: 10 V IEC/EN 61000-4-6

Interference suppression: Limit value class B EN 55011

Technical Data

Degree of protection

Housing: IP 40 IEC/EN 60529

Terminals: IP 20 IEC/EN 60529

Housing: Thermoplastic with V0 behaviour
according to UL subject 94

Vibration resistance: Amplitude 0.35 mm,
Frequency 10 ... 55 Hz, IEC/EN 60068-2-6

Climate resistance: 20 / 060 / 04 IEC/EN 60068-1

Terminal designation: EN 50005

Wire connection: DIN 46228-1/-2/-3/-4

Screw terminals

(integrated):

1 x 4 mm² solid or

1 x 2.5 mm² stranded ferruled (isolated)

or

2 x 1.5 mm² stranded ferruled (isolated)

or

2 x 2.5 mm² solid

Insulation of wires

or sleeve length:

8 mm

Plug in with screw terminals

Max. cross section

for connection:

1 x 2.5 mm² solid or

1 x 2.5 mm² stranded ferruled (isolated)

Insulation of wires

or sleeve length:

8 mm

Plug in with cage

clamp terminals

Max. cross section

for connection:

1 x 4 mm² solid or

1 x 2.5 mm² stranded ferruled (isolated)

Min. cross section

for connection:

0.5 mm²

Insulation of wires

or sleeve length:

12 ±0.5 mm

Wire fixing:

Plus-minus terminal screws M 3.5

box terminals with wire protection or

cage clamp terminals

0.8 Nm

Fixing torque:

Mounting:

DIN rail

IEC/EN 60715

Weight:

140 g

Dimensions

Width x height x depth

MK 9906N/600: 22.5 x 90 x 97 mm

MK 9906N PC/600: 22.5 x 111 x 97 mm

MK 9906N PS/600: 22.5 x 104 x 97 mm

Standard Type

MK 9906N.82/600 AC 220 ... 240 V 1.5 ... 30 s

Article number: 0056017

• Output: 2 Wechsler

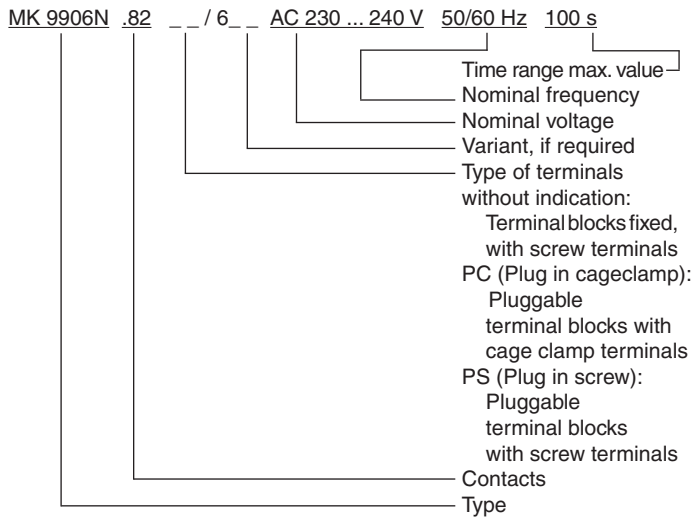
• Nominal voltage U_N : AC 220 ... 240 V

• Width: 22.5 mm

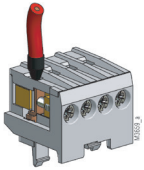
Variant

MK 9906N.82/608: DC 24 V, 2 changeover contacts
inrush 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)

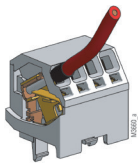
Ordering example for variants



Options with Pluggable Terminal Blocks



Screw terminal
(PS/plugin screw)



Cage clamp
(PC/plugin cage clamp)

Notes

Removing the terminal blocks with cage clamp terminals

1. The unit has to be disconnected.
2. Insert a screwdriver in the side recess of the front plate.
3. Turn the screwdriver to the right and left.
4. Please note that the terminal blocks have to be mounted on the belonging plug in terminations.

