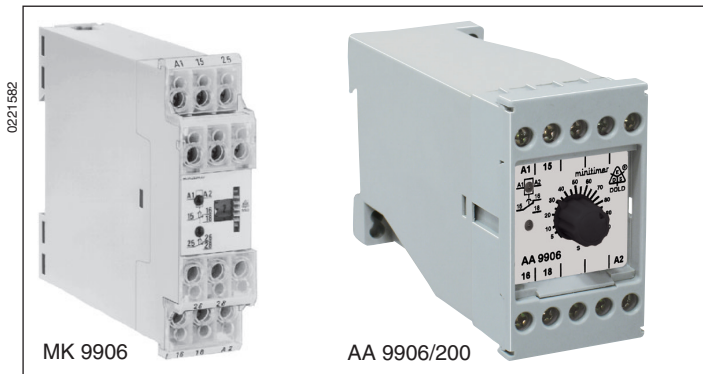


Time Control Technique

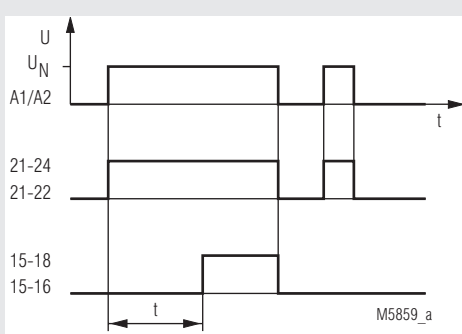
MINITIMER
Timer, On-delay
MK 9906, AA 9906/200

Translation
of the original instructions



- Power ON-delay relay according to EN 61812-1
- 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



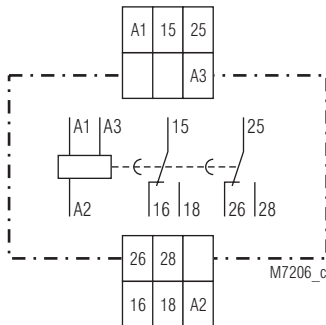
Applications

Time-dependent controllers

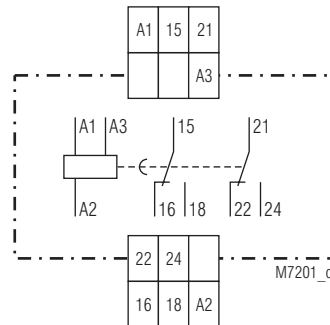
Indicators

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

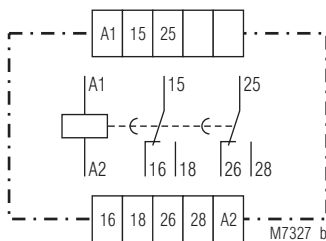
Circuit Diagrams



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: Steppless on an absolute scale
Recovery time: 40 ms
tw 50 / 100:
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 (on request)
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

Connection Terminals

Terminal designation	Signal description
A1, A3(+), A2	Operating voltage
15, 16, 18 25, 26, 28	2 changeover contacts (delayed, MK 9906.82, AA 9906.82/200)
21, 22, 24	Changeover contact (instantaneous contact, MK 9906.32)

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	$\pm 5\% f_N$		
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	
Measured nominal voltage:	AC 250 V	
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 60947-5-1
NC contact:	1 A / AC 230 V	IEC/EN 60947-5-1
AA 9906/200		
NO contact:	10 A / AC 230 V	IEC/EN 60947-5-1
NC contact:	5 A / AC 230 V	IEC/EN 60947-5-1
Electrical life	IEC/EN 60947-5-1	
To AC 15 at 3 A, AC 230 V:	5 x 10 ⁵ switching cycles	
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 x 10 ⁶ switching cycles	

General Data

Operating mode:	Continuous operation	
Temperature range		
Operation and Storage		
MK 9906:	- 20 ... + 60 °C	
AA 9906/200:	- 40 ... + 60 °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	
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		
MK 9906:		
80 MHz ... 1 GHz:	10 V / m	IEC/EN 61000-4-3
1 GHz ... 2 GHz:	3 V / m	IEC/EN 61000-4-3
2 GHz ... 2.7 GHz:	1 V / m	IEC/EN 61000-4-3
AA 9906/200:		
80 MHz ... 1 GHz:	10 V / m	IEC/EN 61000-4-3
1 GHz ... 2 GHz:	10 V / m	IEC/EN 61000-4-3
2 GHz ... 2.7 GHz:	10 V / m	IEC/EN 61000-4-3
Fast transients	4 kV	IEC/EN 61000-4-4
Surge voltages		
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
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	

Technical Data

Wire connection:		
MK 9906:	2 x 1.5 mm ² solid or 2 x 1.0 mm ² stranded wire with sleeve DIN 46228-1/-2/-3/-4	
AA 9906/200:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded wire with sleeve DIN 46228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60999-1	
Insulation of wires or sleeve length		
MK 9906:	8 mm	
AA 9906/200:	10 mm	
Fixing torque:		
MK 9906:	0.4 Nm	
AA 9906/200:	0.8 Nm	
Mounting:	DIN rail IEC/EN 60715	
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

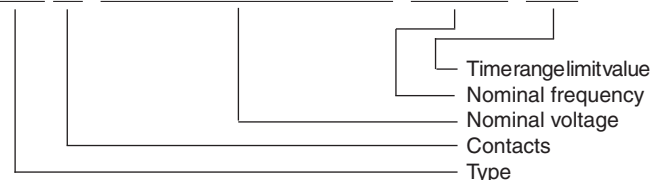
MK 9906 AC/DC 24 V + AC 220 ... 240 V	0.5 ... 10 s
Article number:	0044853
• Output:	2 changeover contacts
• Nominal voltage U_N :	AC/DC 24 V + AC 220 ... 240 V
• Width:	22.5 mm

AA 9906.82/200 AC/DC 24 ... 240 V	1,5 ... 30 s
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Article number:	0039285
• Output:	2 changeover contacts
• Nominal voltage U_N :	AC/DC 24 ... 240 V
• Width:	45 mm

Ordering Example

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