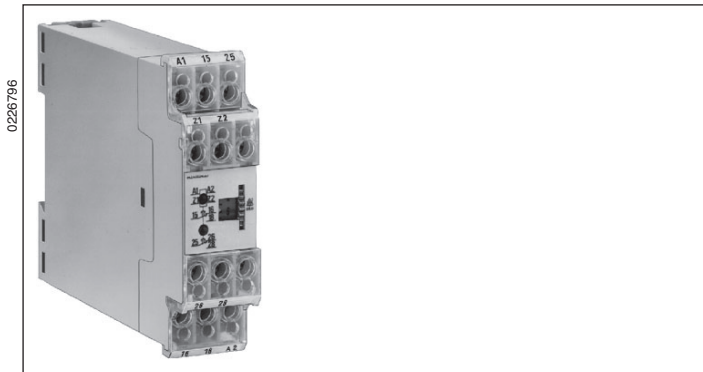


Time Control Technique

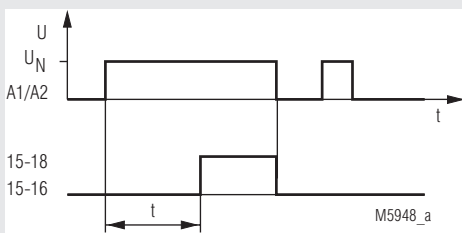
MINITIMER
Timer, On-delay
MK 9908

Translation
of the original instructions



- Power ON-delay relay according to EN 61812-1
- Delay up to 300 s
- Repeat accuracy $\pm 1\%$
- Remote potentiometer connection
- Control with 2-wire-initiators possible
- LED-indication for supply and contact position
- 2 changeover contacts
- Width 22.5 mm

Function Diagram



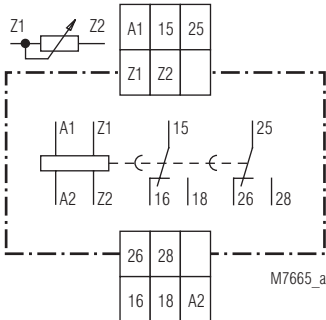
Approvals and Markings



Applications

Time dependent controls

Circuit Diagrams



Indicators

- Upper LED: On when operating voltage applied
- Lower LED: On when output relay activated

MK 9908.82

Connection Terminals

Terminal designation	Signal description
A1, A2	Operating voltage
15, 16, 18, 25, 26, 28	Changeover contacts
Z1, Z2	Input for remote potentiometer connection for time setting

Technical Data	
Time circuit	
Time ranges:	0.05 ... 1 s 0.15 ... 3 s 0.5 ... 10 s 1.5 ... 30 s 5 ... 100 s 15 ... 300 s
Time setting:	Stepless on absolute scale remote setting by external potentiometer
Recovery time tw 50 / 100:	< 200 ms / < 100 ms
Repeat accuracy:	< ± 1 % of the max. scale value
Voltage influence:	≤ 2 % at 0.8 ... 1.1 U _N
Temperature influence:	≤ 0.3 % / K

Input	
Nominal voltage U_N (Operating voltage):	AC 220 ... 240 V (others on request) AC/DC 24 V
Voltage range:	0.8 ... 1.1 U _N at AC
Permissible residual current:	5 mA
Nominal consumption AC 230 V:	7 VA
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 % f _N
Release voltage:	15 % U _N

Output	
Contacts:	2 changeover contacts delayed
Contact material:	AgSnO ₂
Voltage rated operating:	AC 250 V
Release time of the contacts:	Approx. 40 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 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:	- 20 ... + 60 °C
Storage:	- 20 ... + 60 °C
Altitude:	≤ 2000 m
Clearance and creepage distances Rated impulse voltage / pollution degree:	4 kV / 2 (base insulation) IEC 60664-1 III
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 ... 1 GHz:	12 V / m IEC/EN 61000-4-3
1 GHz ... 2,7 GHz:	10 V / m IEC/EN 61000-4-3
Fast transients Surge voltages Between wires for power supply:	2 kV IEC/EN 61000-4-5
Between wire and ground:	4 kV IEC/EN 61000-4-5
HF-wire guided 80 MHz ... 1 GHz:	12 V / m IEC/EN 61000-4-3
1 GHz ... 2,7 GHz:	10 V / m IEC/EN 61000-4-3
Interference suppression:	Limit value class B EN 55011
Degree of protection Housing:	IP 40 IEC/EN 60529
Terminals:	IP 20 IEC/EN 60529

Technical Data	
Housing:	Thermoplast with V0-behaviour according to UL subj. 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:	2 x 1.5 mm ² solid or strand. wire with sleeve DIN 46228-1/-2/-3/-4
Insulation of wires or sleeve length:	8 mm
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60999-1
Fixing torque:	0.4 Nm
Mounting:	DIN rail IEC/EN 60715
Weight:	150 g

Dimensions	
Width x height x depth:	22.5 x 82 x 99 mm

Standard Type	
MK 9908 AC 220 ... 240 V	0.5 ... 10 s
Article number:	0044923
• Output:	2 changeover contacts, delayed
• Nominal voltage U _N :	AC 220 ... 240 V
• Time range:	0.5 ... 10 s
• Width:	22.5 mm

Ordering Example	
MK 9908 / _ _ AC 220 ... 240 V	50 / 60 Hz 15 ... 300 s
	Time range
	Nominal frequency
	Nominal voltage
	Variant, if required
	Type

Accessories	
ET 4752-143:	Making plate Article number: 0043203
AD 3:	External potentiometers
Article number 0004082:	0.05 ... 1 s 1 MΩ
Article number 0006154:	0.15 ... 3 s 2.2 MΩ
Article number 0004084:	0.5 ... 10 s 10 MΩ
Article number 0004085:	1.5 ... 30 s 20 MΩ
Article number 0004085:	5 ... 100 s 20 MΩ
Article number 0004085:	15 ... 300 s 20 MΩ

Degree of protection front side: IP 40

