

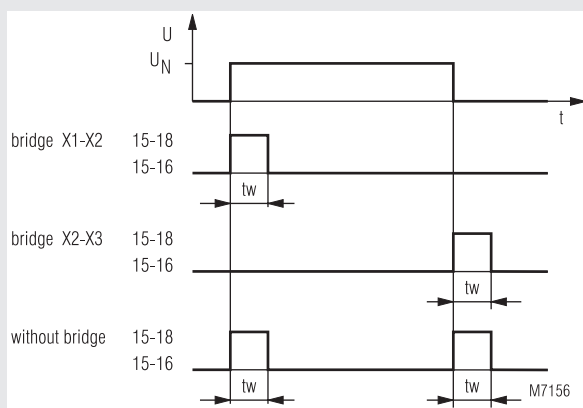
Time Control Technique

MINITIMER Fleeting Action Timer MK 9988



- According to IEC/EN 61 812-1
- Programmable: fleeting on make, fleeting on break, fleeting on make and brake
- Fleeting time 0.3 ... 0.6 s fixed
- Repeat accuracy $\pm 5\%$
- LED indication for supply and contact position
- 2-wire-proximity sensor control
- Available with 1 or 2 changeover contacts
- Width 22.5 mm

Function Diagram



Approvals and Markings



Applications

Time-dependent controllers

Indicators

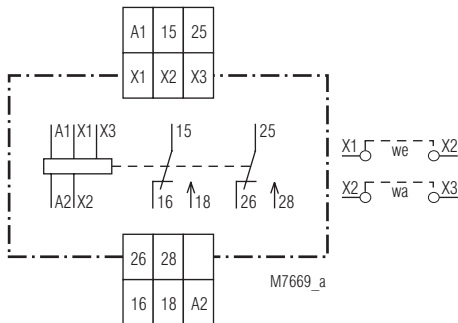
LED: on, when supply connected

Notes



On terminals X1, X2, X3 only short wire links must be used to avoid capacitive coupled interference.

Circuit Diagram



MK 9988.52

Connection Terminals

Terminal designation	Signal designation
A1, A2	operating voltage
X1, X2, X3	Programming inputs X1, X2, X3 open: fleeting on make and break X1, X2 bridged: fleeting on make X2, X3 bridged: fleeting on break
15, 16, 18	1. fleeting (changeover contact)
25, 26, 28	2. fleeting (changeover contact)

Technical Data

Time circuit

Fleeting time:	0.3 ... 0.6 s fixed
Repeat accuracy:	< ± 5 %
Min. switch-off time:	1 s
Voltage influence:	- 5 % / + 10 %
Temperature influence:	± 0.25 % / K

Input

Nominal voltage U_N:	AC 110, 127, 220 ... 240 V AC/DC 24, 42, 48 V
Voltage range:	0.8 ... 1.1 U_N
Nominal power consumption:	8 VA / AC 230 V
Nominal frequency:	50 / 60 Hz
Permissible residual current:	≤ 5 mA

Output

Contacts:	
MK 9988.51:	1 fleeting (changeover contact) programmable
MK 9988.52:	2 fleeting (changeover contacts) programmable
Contact material:	AgSnO ₂
Measured nominal voltage:	AC 250 V
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:	1 A / AC 230 V IEC/EN 60 947-5-1
Electrical life to AC 15 at 3 A, AC 230 V:	5 x 10 ⁵ switching cycles
Permissible switching frequency:	3 000 switching cycles / h
Short-circuit strength max. fuse rating:	6 A gG / gL IEC/EN 60 947-5-1
Mechanical life:	20 x 10 ⁶ switching cycles

General Data

Operating mode:	Continuous operation
Temperature range	
Operation:	- 20 ... + 60 °C
Storage:	- 40 ... + 70 °C
Relative air humidity	93 % at 40 °C
Altitude:	< 2,000 m
Clearance and creepage distances	
rated impulse voltage / pollution degree:	4 kV / 2 (basis insulation) IEC 60 664-1
Overvoltage category:	III
Insulation test voltage, type test:	2,5 kV; 1 min
EMC	
Electrostatic discharge:	6 kV (contact) IEC/EN 61 000-4-2 8 kV (air) IEC/EN 61 000-4-2
HF irradiation	
80 MHz ... 1 GHz:	20 V / m IEC/EN 61 000-4-3
1 GHz ... 2.7 GHz:	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:	12 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 Subj. 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

Technical Data

Terminal designation:	EN 50 005
Wire connection:	2 x 1.5 mm ² solid or stranded wire with sleeve DIN 46 228-1/-2/-3/-4
Insulation of wires or sleeve length:	8 mm
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1 0.4 Nm
Fixing torque:	
Mounting:	DIN rail IEC/EN 60 715
Weight:	140 g

Dimensions

Width x height x depth:	22.5 x 82 x 99 mm
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Standard Type

MK 9988.51 AC 220 ... 240 V	50 / 60 Hz
Article number:	0003532
• Output:	1 fleeting (changeover contact)
• Nominal voltage U_N :	AC 220 ... 240 V
• Width:	22.5 mm

Ordering Example

MK 9988	.51	AC 230 V	50 / 60 Hz	
				Nominal frequency
				Nominal voltage
				Contacts
				.51 = 1 fleeting (changeover contact)
				.52 = 2 fleeting (changeover contact)
				Type

Accessories

ET 4752-143:	Marking plate Article number: 0043203
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