

Time Control Technique

MINITIMER

Timer, Release Delay

BA 7962, AA 9962¹⁾, MK 9962

¹⁾ Only for replacement



- According to IEC/EN 61 812-1
- Time delay up to 100 h
- Repeat accuracy $\leq \pm 1 \%$
- With auxiliary voltage (Nominal voltage U_N)
- MK 9962 with dual voltage supply
- Control by voltage free contact
MK 9962 optionally control by supply voltage
- 2 LED displays for control and contact position
- 2 changeover contacts
- BA 7962, AA 9962: width 45 mm
MK 9962: width 22.5 mm

Approvals and Markings



* see variants

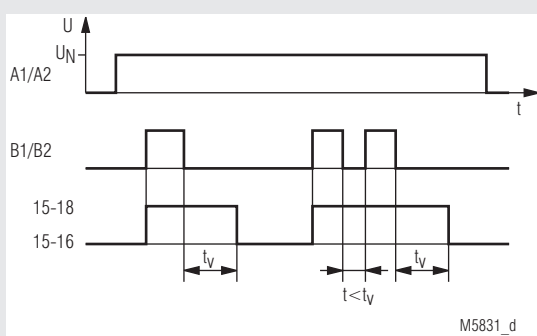
Applications

Time-dependent controllers

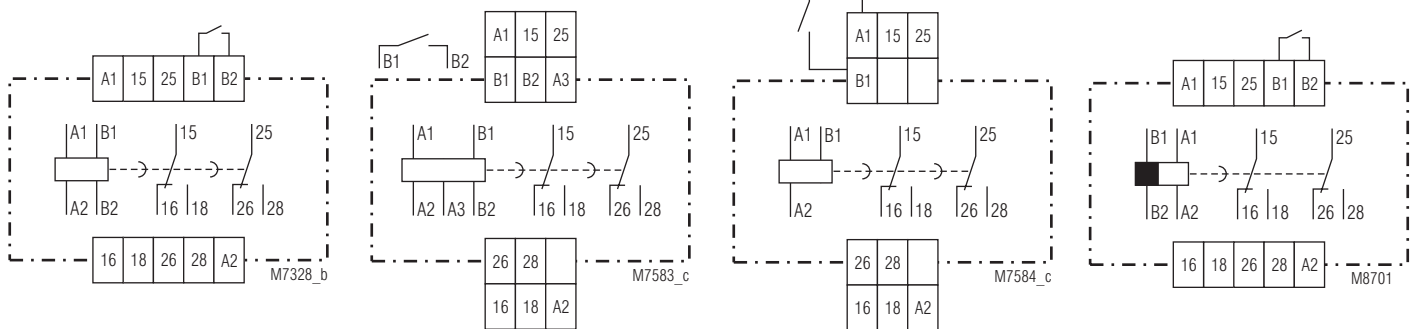
Indication

upper LED: on when control contact closed
lower LED: on when output relay energized

Function Diagram



Circuit Diagrams



BA 7962.82, AA 9962.82

MK 9962

MK 9962.82/020

BA 7962.82/200 mit zwangsgeführten Kontakten

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 s	
15 ... 300 s	
Time setting: stepless on absolute scale	
Min. switch-on time: 20 ms	
Repeat accuracy: $\leq \pm 1\%$ of set value	
Voltage influence: $\leq \pm 0.5\%$	
Temperature influence: $< \pm 0.1\%$ / K	

Input	
Nominal voltage U_N:	
BA 7962, AA 9962:	AC 24, 42, 110, 127, 230, 240 V DC 24, 48, 60, 110, 220, 240 V
MK 9962:	AC/DC 24 V ¹⁾ + AC 110 ... 127 V ²⁾ AC/DC 24 V ¹⁾ + AC 220 ... 240 V ²⁾ AC/DC 24 V ¹⁾ + AC/DC 42 V ²⁾
	¹⁾ at terminals A3 - A2 ²⁾ at terminals A1 - A2
Voltage range: 0.8 ... 1.1 U_N at AC	
Nominal power consumption:	
BA 7962, AA 9962:	AC 3.5 VA
	DC 24 V 1 W
	DC 48 V 2 W
	DC 60 V 2 W
	DC 110 V 2 W
	DC 220 V 3 W
	DC 240 V 3 W
MK 9962:	AC 24 V 0.8 VA
	AC 42 V 1.8 VA
	AC 110 V 3.5 VA
	AC 230 V 7 VA
	AC 240 V 8 VA
	DC 24 V 0.8 W
	DC 42 V 1.8 W
Nominal frequency: 50 / 60 Hz	
Frequency range: $\pm 5\%$ f_N	

Output	
Contacts	
BA 7962.82, AA 9962.82, MK 9962:	2 delayed changeover contacts
Contact material: AgNi 0.2 μ , gold plated	
Measured nominal voltage: AC 250 V	
Thermal current I_{th}: 5 A	
Switching capacity to AC 15	
NC contact:	1 A / AC 230 V IEC/EN 60 947-5-1
NO contact:	3 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:	
BA 7962.82, AA 9962.82:	0.5 x 10 ⁵ switching cycles
MK 9962:	5 x 10 ⁵ switching cycles
Permissible operating 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 10 ⁶ switching cycles	

General Data	
Operating mode: Continuous operation	
Temperature range	
Operation, Storage	
BA 7962, AA 9962 (AC), MK 9962:	- 20 ... + 60 °C
BA 7962, AA 9962 (DC):	- 20 ... + 50 °C
Altitude: < 2,000 m	

Technical Data	
Clearance and creepage distances	
rated impulse voltage / pollution degree:	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:	2 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
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...55Hz IEC/EN 60 068-2-6 20 / 060 / 04 IEC/EN 60 068-1	
Climate resistance:	
Terminal arrangement: DIN 46 199-5	
Terminal designation: EN 50 005	
Wire connection:	
BA 7962, AA 9962:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded wire with sleeve
MK 9962:	2 x 1.5 mm ² solid or 2 x 1.0 mm ² 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	
Fixing torque	
BA 7962, AA 9962:	0.8 Nm
MK 9962:	0.4 Nm
Mounting: DIN rail IEC/EN 60 715	
Weight	
BA 7962, AA 9962 (AC):	240 g
BA 7962, AA 9962 (DC):	150 g
MK 9962:	180 g
Dimensions	
Width x height x depth:	
BA 7962:	45 x 73 x 133 mm
AA 9962:	45 x 77 x 127 mm
MK 9962:	22.5 x 82 x 99 mm

Standard Type	
MK 9962 AC/DC 24 V + AC 220 ... 240 V 15 ... 300 s	
Article number:	0044937
• Output:	2 changeover contacts
• Nominal voltage U_N :	AC/DC 24 V + AC 220 ... 240 V
• Time range:	15 ... 300 s
• Width:	22.5 mm

Variants	
MK 9962/61:	with UL-approval
MK 9962.82/020:	control by supply voltage, single voltage model
AC/DC 24 V, AC 220 ... 240 V	
BA 7962.82/200:	2 guided changeover contacts delayed

Ordering example for variants	
MK 9962 .82 / _ _ _ AC 220 ... 240 V 50 / 60 Hz 300 s	
	Time range end value
	Nominal voltage
	Variant, if required
	Contact
	Type

Accessories	
ET 4752-143:	Marking plate for MK 9962 Article number: 0043203