

Time Control Technique

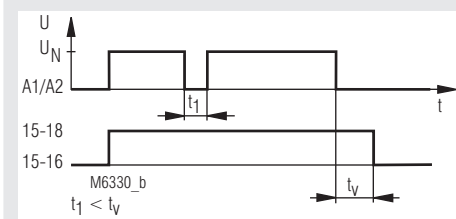
MINITIMER
Timer, Release Delay
BA 7954, AI 954N*

***Only for replacement**
Replacements:
MK 7873N, BA 7954



- According to IEC/EN 61 812-1
- Release delay, without control signal
- No-voltage safe
- Delay up to 300 s
- Repeat accuracy $< \pm 1 \%$
- For 2-wire proximity sensors
- 2 changeover contacts
- Width 45 mm

Function Diagram



Approvals and Markings



Indication

LED: on when operating voltage applied

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
Repeat accuracy: $\leq \pm 1 \%$
Min. setting time: 25 ms

Attention!
 Time faults when min. setting time $< 10 \%$. When setting time longer, the fault will be less.

Voltage influence: $< \pm 1 \%$
Temperature influence $< 0.3 \%$ / K

Input

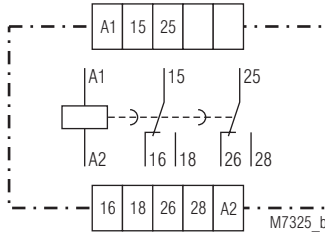
Nominal voltage U_N : AC 24, 42, 110, 127, 230, 240 V
 DC 24 V

DC 48 V*: ZWS 20 SL 390 Ω 20 W
 DC 60 V*: ZWS 20 SL 640 Ω 20 W
 DC 110 V*: ZWS 20 SL 1.5 k Ω 20 W
 DC 220 V*: ZWS 35 SL 3.3 k Ω 35 W
 *) with external series resistor
 The series resistors have to be used together with DC 24 V-devices. The series resistor has to be connected to (+).

Voltage range: 0.8 ... 1.1 U_N
Permissible residual current: ≤ 2.5 mA
Nominal consumption: AC 3 VA
 DC 48 60 110/127 220 V
 3.0 3.5 6.5 13.0 W

Nominal frequency: 50 / 60 Hz
Recovery time: ≥ 25 ms

Circuit Diagram



BA 7954.82, AI 954 N.0082

Connection Terminals

Terminal designation	Signal description
A1, A2	Operating voltage
15, 16, 18	Changeover contacts (output relay)
25, 26, 28	Changeover contacts (2. output relay)

Technical Data

Output

Contacts:

BA 7954.82, AI 954 N.82: 2 changeover contacts, delayed

Contact material: AgSnO₂, 0,2µm Au

Measured nominal voltage: AC 250 V

Operate time of the contacts: ≤ 25 ms

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 IEC/EN 60 947-5-1

to AC 15 at 1 A, AC 230 V: 2.5 x 10⁵ switching cycles

Permissible switching frequency:

6000 switching cycles / h

Short-circuit strength

max. fuse rating: 4 A gG / gL IEC/EN 60 947-5-1

Mechanical life: > 10 x 10⁶ switching cycles

General Data

Operating mode:

Continuous operation

Temperature range

Operation: - 20 ... + 60 °C

Storage: - 20 ... + 60 °C

Altitude: < 2,000 m

Clearance and creepage distances

rated impulse voltage /

pollution degree: 4 kV / 2 IEC 60 664-1

Overvoltage category: III

Insulation test voltage,

type test: 2.5 kV; 1 min

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2

HF irradiation

80 MHz ... 1 GHz: 10 V / m IEC/EN 61 000-4-3

1 GHz ... 2 GHz: 10 V / m IEC/EN 61 000-4-3

2 GHz ... 2.7 GHz: 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: 1 kV IEC/EN 61 000-4-5

between wire and ground: 2 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:

Thermoplast with V0 behaviour according to UL subject 94

Vibration resistance:

Amplitude 0.35 mm frequency 10...55Hz IEC/EN 60 068-2-6

Climate resistance: 20 / 060 / 04 IEC/EN 60 068-1

Terminal arrangement: DIN 46 199-5

Terminal designation: EN 50 005

Wire connection:

2 x 2.5 mm² solid or 2 x 1.5 mm² 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:

0,8 Nm

Mounting: DIN rail IEC/EN 60 715

Weight:

260 g

Dimensions

Width x height x depth

BA 7954: 45 x 73 x 133 mm

AI 954N: 45 x 77 x 127 mm

Standard Type

BA 7954.82 AC 230 V 50 / 60 Hz 0.5 ... 10 s

Article number: 0024075

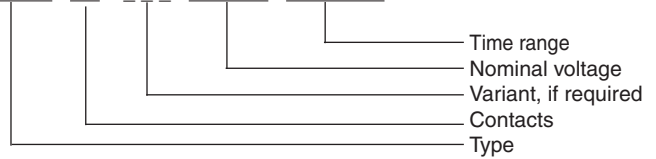
Nominal voltage U_N: AC 230 V

Time range: 0.5 ... 10 s

Width: 45 mm

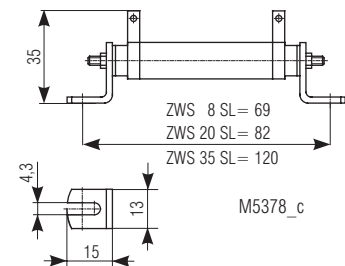
Ordering example for variant

BA 7954 .82 / _ _ DC 24 V 0.5 ... 10 s



Accessories

ZWS 20 SL, ZWS 35 SL: Series resistors



for BA 7954:

ET 4762-5

Adaptor

Article number: 0023119

for AI 954 N:

K 70-34 Transparent cover

Article number: 0011790