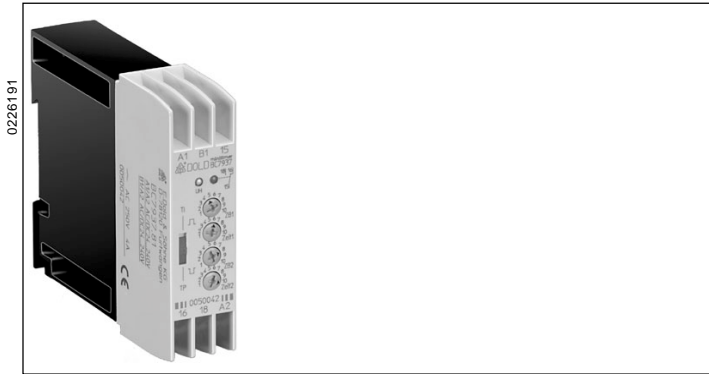


Time control technique

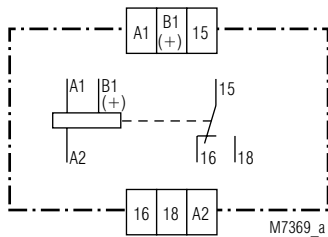
Cyclic timer BC 7937, BC 7937N minitimer

BC 7937N with Box terminals

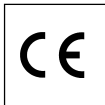


- According to IEC/EN 61 812-1
- With 10 time ranges from 0,05 s ... 300 h
- Impulse and break time separately adjustable
- Selectable start with impulse or break
- AC/DC 24 ... 240 V
- Control input for interruption of the time elapse
- LED indication for voltage supply and contact position
- Flashing function during elapse of time
- 1 changeover contact
- BC 7937N, Wire connection: also 2 x 1,5 mm² stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2,5 mm² stranded ferruled DIN 46 228-1/-2/-3
- Width 22,5 mm

Circuit diagram



Approvals and marking



Applications

Time-dependent controllers

Indication

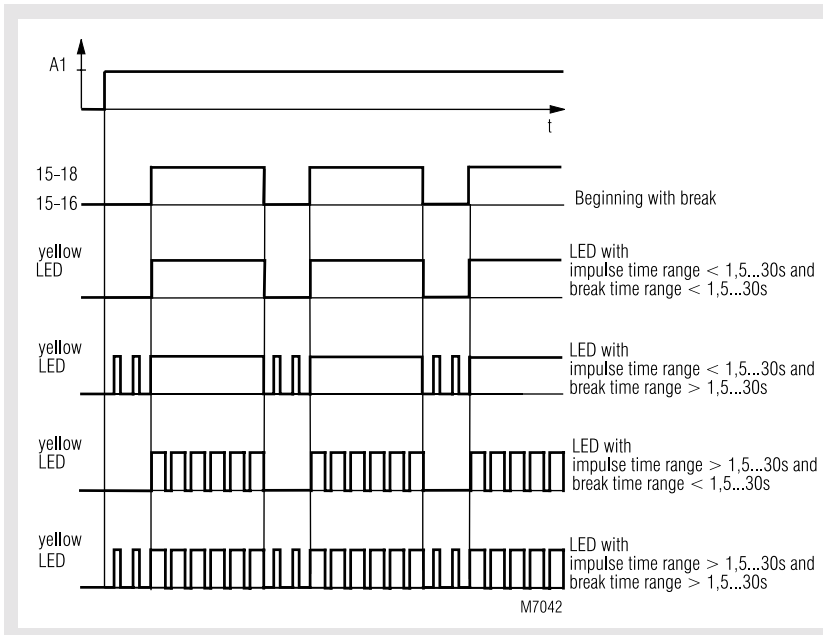
green LED: on, when supply connected
 yellow LED: see Function diagramm

Technical data

Time circuit

- Time ranges:**
- | | |
|-----------------|-------------------|
| 1) 0,05 ... 1 s | 7) 1,5 ... 30 min |
| 2) 0,15 ... 3 s | 8) 15 ... 300 min |
| 3) 0,5 ... 10 s | 9) 1,5 ... 30 h |
| 4) 1,5 ... 30 s | 10) 15 ... 300 h |
| 5) 5 ... 100 s | |
| 6) 15 ... 300 s | |
- selectable via time-range-switch (ZB)
 infinite variable via potentiometer (Zeit)
- Time setting:** ≤ 50 ms
Recovery time: ≤ 2 %
Repeat accuracy: ≤ 1 %
Voltage influence: ≤ 1 %

Function diagram



Technical data

Temperature influence: ≤ 0,05 % / K

Input

Nominal voltage U_N
(A1/A2 and B1/A2): AC/DC 24 ... 240 V, DC 12 V
Voltage range: 0,8 ... 1,1 U_N
Nominal consumption:
 at AC 240 V: 1,4 VA
 at DC 240 V: 1,8 W
Nominal frequency: 50 / 60 Hz
Release voltage:
 AC: ≥ 15 % U_N
 DC: ≥ 5 % U_N

Output

Contacts
 BC 7937.81; BC 7937N.81: 1 changeover contact
Thermal current I_{th} : 4 A
Switching capacity
 to AC 15: 3 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: typ. 500 000 switching cycles
Short circuit strength
max. fuse rating: 4 A gL IEC/EN 60 947-5-1
Mechanical life: 10⁸ switching cycles

General data

Operating mode: Continuous operation
Temperature range: 0 ... + 60°C
Clearance and creepage distances
 overvoltage category /
 contamination level: 4 kV / 2 IEC 60 664-1
EMC
 Electrostatic discharge: 6 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
 wired for power supply: 1 kV IEC/EN 61 000-4-5
 between wire and ground: 2 kV IEC/EN 61 000-4-5
 HF wire guided: 10 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
 to UL subject 94
Vibration resistance: Amplitude 0,35 mm
 frequency 10 ... 55 Hz IEC/EN 60 068-2-6
Climate resistance: 0 / 060 / 04 IEC/EN 60 068-1
Terminal designation: EN 50 005

Wire connection
 BC 7937: 1 x 4 mm² solid or
 2 x 1,5 mm² stranded wire with sleeve
 DIN 46 228-1/-2/-3/-4
 BC 7937N: 1 x 4 mm² solid or
 1 x 2,5 mm² stranded ferruled (isolated)
 or
 2 x 1,5 mm² stranded ferruled (isolated)
 DIN 45 228-1/-2/-3/-4 or
 2 x 2,5 mm² stranded ferruled
 DIN 46 228-1/-2/-3

Wire fixing:
 BC 7937: Flat terminals with self-lifting
 clamping piece IEC/EN 60 999-1
 BC 7937N: Terminal screws M 3,5
 Box terminal with wire protection

Mounting: DIN rail IEC/EN 06 715
Weight: 110 g

Dimensions

Width x height x depth: 22,5 x 84 x 97 mm

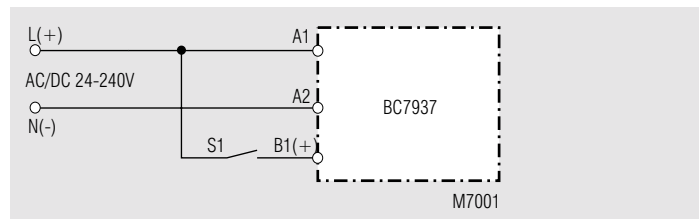
Standard type

BC 7937N.81 AC/DC 24 ... 240 V 50/60 Hz
 Article number: 0052780
 • Front colour grey, with box terminals
 • Output: 1 changeover contact
 • Nominal voltage U_N : AC/DC 24 ... 240 V
 • Width: 22,5 mm

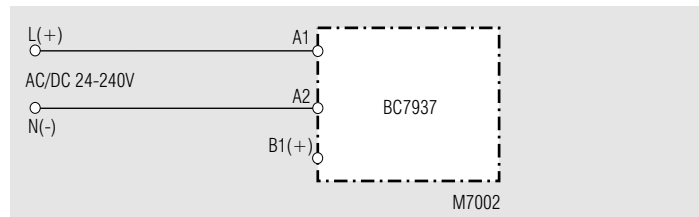
Ordering example

BC 7937 .81 AC/DC 24 ... 240 V 50 / 60 Hz
 Nominal frequency
 Nominal voltage
 Contacts
 BC 7937 N: front colour
 grey, with box terminals
 BC 7937: front colour
 orange, with flat terminals

Connection examples



Connection example with control contact S1 for interruption of the time elapse



Connection example without control contact

Geräteeinstellung

