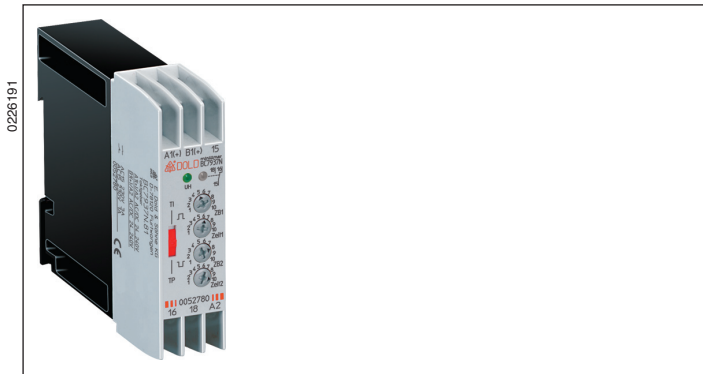
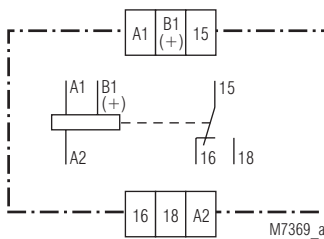


## MINITIMER Cyclic Timer BC 7937N



- 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
- Wire connection: also 2 x 1.5 mm<sup>2</sup> stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2.5 mm<sup>2</sup> stranded ferruled DIN 46 228-1/-2/-3
- Width 22.5 mm

### Circuit Diagram



### Approvals and Marking



### Applications

Time-dependent controllers

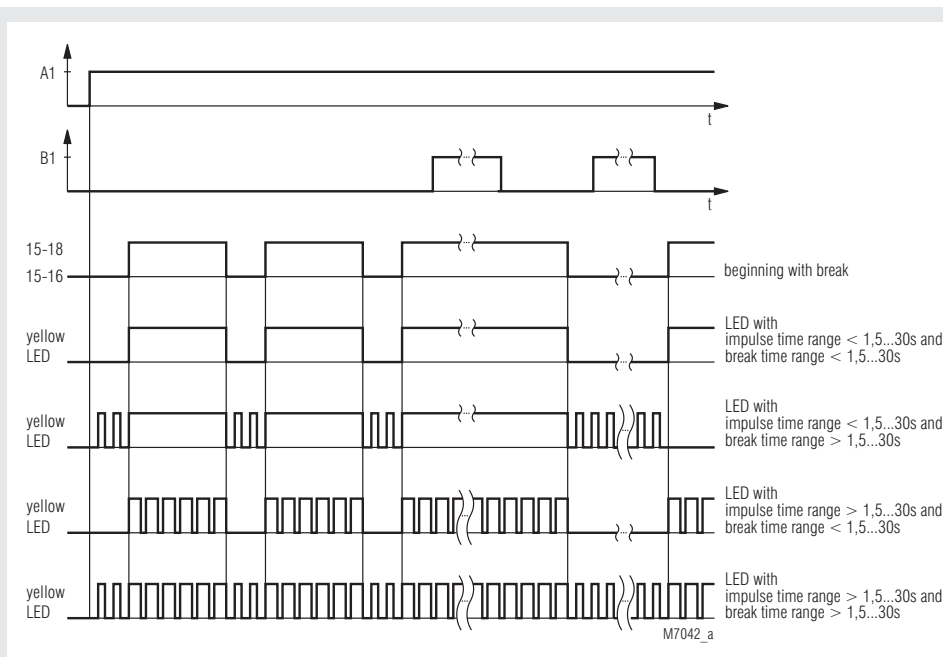
### Indication

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

### Notes

When changing the time ranges for impulse / break the device must be reset by disconnecting the supply voltage. By energising control input B1 the time elapse is stopped. E.g. activating control input B1 during timing of  $T_{impuls}$  for the time B1 the output is energized for  $T_{impuls}$  and  $T_{B1}$ .

### Function Diagram



## Technical Data

### Time circuit

<b>Time ranges:</b>	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	

### Time setting:

<b>Recovery time:</b>	selectable via time-range-switch (ZB)
<b>Repeat accuracy:</b>	infinite variable via potentiometer (Zeit)
<b>Voltage influence:</b>	≤ 2 %
<b>Temperature influence:</b>	≤ 1 %
	≤ 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: 4 VA

at DC 240 V: 1.33 W

**Nominal frequency:** 50 / 60 Hz

**Release voltage:** AC: ≥ 15 %  $U_N$

DC: ≥ 5 %  $U_N$

## Output

**Contacts:** 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

to DC 13: 2 A / DC 24 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. 150 000 switching cycles

to DC 13 at 1 A, DC 24 V: typ. 100 000 switching cycles

### Short circuit strength

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

**Mechanical life:** 10<sup>8</sup> switching cycles

## General Data

**Operating mode:** Continuous operation

**Temperature range:** 0 ... + 60°C

### Clearance and creepage distances

rated impuls voltage / pollution degree: 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

0 / 060 / 04 IEC/EN 60 068-1

### Climate resistance:

**Terminal designation:** EN 50 005

**Wire connection:** 1 x 4 mm<sup>2</sup> solid or

1 x 2.5 mm<sup>2</sup> stranded ferruled (isolated)

or

2 x 1.5 mm<sup>2</sup> stranded ferruld (isolated)

DIN 45 228-1/-2/-3/-4 or

2 x 2.5 mm<sup>2</sup> stranded ferruled

DIN 46 228-1/-2/-3

## Technical Data

### Wire fixing:

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

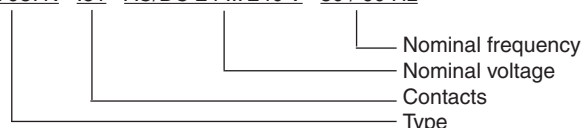
• Output: 1 changeover contact

• Nominal voltage  $U_N$ : AC/DC 24 ... 240 V

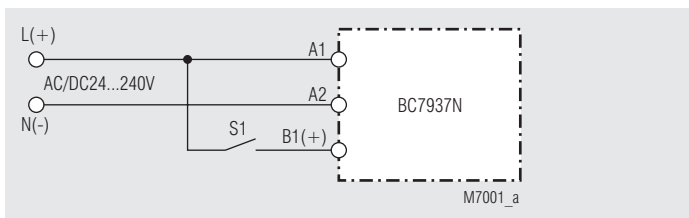
• Width: 22.5 mm

## Ordering Example

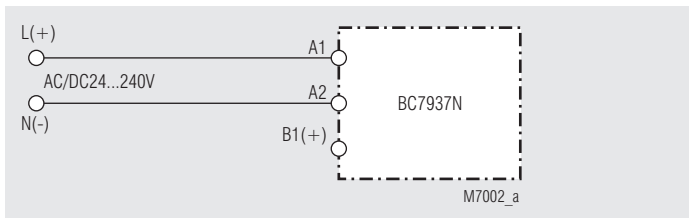
BC 7937N .81 AC/DC 24 ... 240 V 50 / 60 Hz



## Connection Examples



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



Connection example without control contact

# Adjustment Facilities

