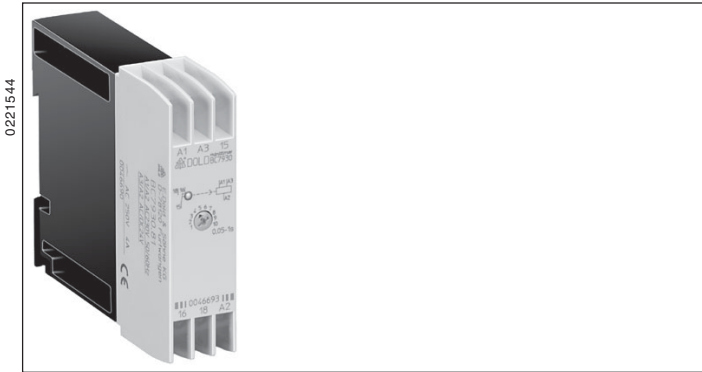


# Time control technique

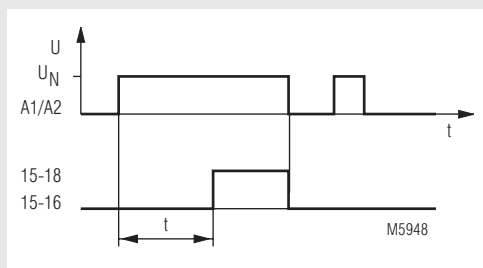
## Timer BC 7930, BC 7930N, operate delay minitimer

BC 7930N with  
Box terminals

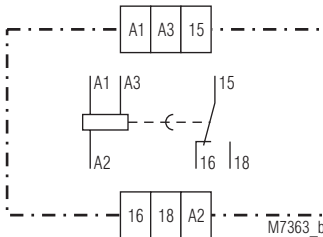


- According to IEC/EN 61 812-1
- Time delay between 0,05 s ... 10 h
- Repeat accuracy  $\leq 0,5 \% + 10 \text{ ms}$
- Dual voltage supply
- LED indicator for contact position
- 1 changeover contact
- BC 7930N Wire connection: also 2 x 1,5 mm<sup>2</sup> stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2,5 mm<sup>2</sup> stranded ferruled DIN 46 228-1/-2/-3
- Width 22,5 mm

### Function diagram



### Circuit diagram



### Approvals and marking



### Applications

Time dependent controllers

### Indication

LED: on when output relay activated (contacts 15-18 are closed)

### Technical data

#### Time circuit

<b>Time ranges:</b>	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	0,15 ... 3 h
	5 ... 100 s	0,5 ... 10 h
	15 ... 300 s	

**Time setting:** stepless 1:20  
**Recovery time:**  $\leq 100 \text{ ms}$   
**Repeat accuracy:**  $\leq 0,5 \% + 10 \text{ ms}$   
**Voltage influence:**  $\leq 1 \%$   
**Temperature influence:**  $\leq 0,25 \% / \text{K}$

#### Input

**Nominal voltage  $U_N$ :** AC/DC 24 V<sup>1)</sup> + AC 230 V<sup>2)</sup>  
 AC/DC 24 V<sup>1)</sup> + AC 110 ... 127 V<sup>2)</sup>  
 AC/DC 24 V<sup>1)</sup> + AC 42 V<sup>2)</sup>  
 AC/DC 12 V  
<sup>1)</sup> at terminals A3-A2  
<sup>2)</sup> at terminals A1-A2

**Voltage range:** 0,8 ... 1,1  $U_N$  at AC  
 0,9 ... 1,25  $U_N$  at DC

**Nominal consumption:** AC: 4 VA  
 DC: 0,4 W

**Nominal frequency:** 50 / 60 Hz  
**Frequency range:**  $\pm 5 \% f_N$   
**Release voltage:** 15 %  $U_N$

#### Output

**Contacts:** BC 7930.81, BC 7930N.81: 1 changeover contact  
**Thermal current  $I_{th}$ :** 4 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: 1,5 x 10<sup>5</sup> switching cycles

## Technical data

### Short circuit strength

<b>max. fuse rating:</b>	4 A gL	IEC/EN 60 947-5-1
<b>Mechanical life:</b>	10 <sup>8</sup> switching cycles	

## General data

**Operating mode:** Continuous operation

**Temperature range:** - 20 ... + 60°C

### Clearance and creepage distances

overvoltage category / contamination level	4 kV / 2	IEC 60 664-1
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### 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: 4 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: 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 IEC/EN 60 068-2-6  
frequency 10 ... 55 Hz

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

**Terminal designation:** EN 50 005

### Wire connection

BC 7930: 1 x 4 mm<sup>2</sup> solid or  
2 x 1,5 mm<sup>2</sup> stranded wire with sleeve  
DIN 46 228-1/-2/-3/-4

BC 7930N: 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 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

### Wire fixing:

BC 7930: Flat terminals with self-lifting  
clamping piece IEC/EN 60 999-1

BC 7930N: Terminal screws M 3,5  
Box terminal with wire protection

**Mounting:** DIN rail IEC/EN 60 715

**Weight:** 80 g

## Dimensions

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

## Standard type

BC 7930N.81 AC/DC 24 V + AC 230 V 5 ... 100 s

Article number: 0052652

- Front colour grey, with box terminals
- Output: 1 changeover contact
- Nominal voltage U<sub>N</sub>: AC/DC 24 V + AC 230 V
- Time range: 5 ... 100 s
- Width: 22,5 mm

## Ordering example

BC 7930 .81 AC/DC 24 + AC 230 V 50 / 60 Hz 10 s

Time range end value  
Nominal frequency  
Nominal voltage  
Contacts  
BC 7930N: front colour  
grey, with box terminals  
BC 7930: front colour  
orange, with flat terminals